Entom
P. C
Hono

Pacific Insects Monograph 26: 1–165 **July 1971**

MEZIRINAE OF THE ORIENTAL REGION AND SOUTH PACIFIC

(Hemiptera-Heteroptera: Aradidae)[1]

By **Nicholas A. Kormilev**[2]

Abstract. This paper treats the subfamily Mezirinae Oshanin, 1908, from Southeast Asia and the South Pacific. The following new taxa are proposed: *Acoryphocoris angusticornis, A. oviventris, A. denticulatus,* and *A. brevicornis* (New Guinea), *A. antennatus* (New Britain, Solomon Is.); *Aphelocoris quadridentatus* and *A. alatus* (New Guinea), *A. confusus* (New Guinea & Bismarck Arch.); *Arbanatus philippinensis* (Philippines), *A. brachypterus, A. pilosulus, A. robustus, A. piliferus, A. polynesicus, A. distinctus, A. scabrosus,* (Samoa), *A. castaneus* (Solomon Is.), *A. minutus* (Austral Is.), *A. longicornis* (Solomon Is. & New Guinea), *A. longulus, A. simplex, A. simulans,* and *A. gressitti* (New Guinea), *A. tahitiensis* (Society Is.), *A. parallelus gracilis,* and *A. longirostris* (Fiji), *A. longiscutum* and *A. abdominalis* (Bismarck Arch., New Guinea & Solomon Is.), *A. subparallelus* (Solomon Is. & New Hebrides), *A. tricolor* and *A. elegantulus* (New Caledonia); *Arictus acuminatus, A. gressitti* and *A. longicornis* (New Guinea), *A. sedlaceki* (Bismarck Arch.), and *A. taiwanicus* (Taiwan); *Artabanus micropterus, A. montanus, A. degeneratus* and *A. brachypterus* (New Guinea), *A. gazellensis* and *A. umboiensis* (Bismarck Arch.), *A. fijiensis* (Fiji), *A. robustus, A. sexdentatus, A. victor, A. gloriosus, A. superbus* and *A. magnificus* (Solomon Is.), and *A. denticeps* (Viet Nam); *Chiastoplonia pauperula* (Laos) and *C. lobata* (New Guinea), *Chinessa brachyptera, C. fulgida, C. forfex, C. armata, C. bellicosa, C. horribilis, C. modesta, C. lobulata, C. paralobulata, C. quadridentata, C. necopinata, C. acuminata, C. gressitti, C. robusta, C. ferox,* and *C. iniqua* (New Guinea), *C. iniqua ceramensis* (Ceram), *C. lobuliventris* (New Britain); *Chrysodaspis* n. gen., type sp. *C. maai,* and *C. angulatus* (Borneo), and *C. ovatus* (Philippines); *Ctenoneurus longiceps,* and *C. philippinensis* (Philippines), *C. lugubris, C. prominens, C. spiculifer* and *C. insignis* (New Guinea), *C. zimmermani, C. major, C. punctiventris* and *C. fijiensis* (Fiji), *C. simulans, C. coghiensis, C. hammaensis,* and *C. cochereaui* (New Caledonia), *C. solomonensis* (Solomon Is.), *C. samoaensis* (Samoa), *C. borneensis* (Borneo), and *C. pendergrasti* (N. Z.); *Daulocoris bicaudatus* (Borneo), *D. formosanus* (Taiwan), *D. gazellensis* (New Britain), and *D. robustus* (Thailand); *Dimifaia* n. gen., type sp. *D. lobulata* (New Guinea); *Glochocoris pusillus* (New Britain), *G. acutus* and *G. truncatus* (New Guinea); *Kema acutissima* (Philippines) and *K. papuasica* (New Guinea); *Kiritschenkiessa* n. gen., type sp. *K. spinipes* (India); *Leiocoris* n. gen., type sp. *L. ferrugineus,* and *L. subparallelus* (New Guinea), *L. angulatus* (Viet Nam), and *L. borneensis* (Borneo); *Mastigocoris usingeri* (Java); *Mezira* (s. s.) *roberti* (Ceram), and *M. piligera* (Viet Nam); *Mezira* (*Zemira*) n. subgen., type sp. *M.* (*Z.*) *membranacea* (F.), 1803 and *M.* (*Z.*) *hispida, M.* (*Z.*) *subinermis, M.* (*Z.*) *exarmata* (Borneo), *M.* (*Z.*) *burmensis* (Burma), *M.* (*Z.*) *kerzhneri, M.* (*Z.*) *parallela* (Malaya), *M.* (*Z.*) *breviceps* and *M.* (*Z.*) *thailandica* (Thailand), *M.* (*Z.*) *serrata* (Viet Nam), *M.* (*Z.*) *rossi* and *M.* (*Z.*) *incisa* (New Guinea), *M.* (*Z.*) *armigera, M.* (*Z.*) *longicornis,* and *M.* (*Z.*) *philippinensis* (Philippines), *M.* (*Z.*) *quadridentata* and *M.* (*Z.*) *sumatrensis* (Sumatra), *M.* (*Z.*) *solomonensis, M.* (*Z.*) *indica* (India) and *M.* (*Z.*) *funebra* (Borneo, Celebes, Ceram, Philippines, New Guinea, and Solomon Is.); *Neuroctenus bicaudatus* (China), *N. ceramensis* (Ceram), *N. lobulatus, N. incautus, N. acutus, N. granuliger, N. seclusus, N. pauperulus, N. brevirostris, N. sedlaceki, N. lobuliventris, N. hortatrix,* and *N. sertiventris* (New Guinea), *N. kashmirensis* (Kashmir), *N. singularis* (Taiwan), *N. indonesicus,* and *N. luchti* (Java), *N. scabrosus,* and *N. bilobatus* (Laos), *N. minor, N. ferreus, N. egelidus, N. appendiculatus, N. millironi, N. persimilis,* and *N. morio* (Philippines), *N. minusculus* (Borneo and Java), *N. gressitti* (Bismarck Arch.), *N. necopinatus,* and *N. fulgidus* (Solomon Is.), *N. foratus, N. longicornis* (Borneo), *N. h. hyalinipennis* (Philippines, Java, Engano & Papua), *N. h. australicus* (Australia), *N. crassicornis* (Philippines & New Guinea), *N. dybasi* (Palau Is. & New Guinea), and *N. eurycephalus* (New Guinea,

[1]Material examined is a result of fieldwork supported by grants to Bishop Museum from U. S. National Science Foundation (G 2127, 4774, 10734) and the U.S.A. M.R.D.C. (DA-MEDDH 60-1), and a grant to J. L. Gressitt from J. S. Guggenheim Foundation (1955–56).

[2]Bishop Museum, Honolulu, Hawaii.

Bismarck Arch., & Solomon Is.), *N. muiri* (Ceram), *Pelecoris* n. gen., type sp. *P. angustus* (New Caledonia); *Pseudoartabanus brachypterus* (Taiwan); *Scironocoris obscurus* and *S. papuasicus* (New Guinea); *Usingerida angulata* (New Guinea), and *Wuiessa minor* (New Guinea).

The following new synonymies are proposed: *Artabanus inermis* Kormilev, 1955 (=*Caecicoris microcerus* (Walker), 1873); *Daulocoris marginella* Bloete, 1965 (=*D. auritomentosus* (Kormilev), 1955); *Mezira modesta* Bloete, 1965 (=*M. membranacea* (F.), 1803); *Neuroctenus lobatus* Matsuda & Usinger, 1957 (=*N. mayri* Stål, 1820), *N. meziroides* Kormilev, 1958 (=*N. subfurcatus* (Walker), 1873), *N. nitidulus* Bergroth, 1887 (=*N. rubrescens* (Walker), 1873); *Pictinellus* Usinger & Matsuda, 1959 (=*Arbanatus* Kormilev, 1955). *Brachyrhyncus nasutus* Stål, 1870 is removed from synonymy under *Mezira membranacea* (F.), 1803 and is newly transferred to *Daulocoris*.

The following taxa are considered *nomena nuda: Daulocorisella lateralis* Bloete, 1965 and *Hammatoneurum quadrispinosum* Bloete, 1965.

The following new combinations are proposed: *Artabanus luchti* Kiritshenko, 1959 to *Dimorphacantha*; *Mezira* (s. s.) *hsiaoi* Bloete, 1965, *M. luzonica* Kormilev, 1965, *M. membranacea* (F.), 1803, *M. micronesica* Esaki & Matsuda, 1951, *M. subtriangula* Kormilev, 1957, *M. sulcata* Kormilev, 1958, *M. teter* (Bergroth), 1894, and *M. triangula* (Bergroth), 1889 to *M.* (*Zemira*); *Neuroctenus parallelus* (Walker), 1873 to *Ctenoneurus* and *N. lateralis* (Walker), 1873 to *Mezira* (s. s.); *Pictenellus brunneus* Kormilev, 1968, *P. elongatus* Kormilev, 1967, *P. leai* Kormilev, 1967, *P. longiceps* Kormilev, 1967, *P. moturikiensis* Kormilev, 1967, *P. pacificus* (China), 1930, *P. parallelus* (Van Duzee), 1932, *P. productus* (Matsuda & Usinger), 1957, and *P. samoanus* (China), 1930 to *Arbanatus*.

Lectotypes were designated for *Aradus membranaceus* Fabricius, 1803; *Crimia parallela* Walker, 1873; and *Neuroctenus serrulatus* Stål, 1870.

Keys are given for the Oriental, Australian and South Pacific genera of Mezirinae and of the Oriental, Australian and South Pacific species of the following genera: *Ctenoneurus* Bergroth, 1887; *Neuroctenus* Fieber, 1861; *Arictus* Stål, 1870; *Artabanus* Stål, 1865; *Chinessa* Usinger and Matsuda, 1959; *Daulocoris* Usinger and Matsuda, 1959; *Chrysodaspis* n. g.; *Scironocoris* Kormilev, 1957; *Leiocoris* n. g.; *Kema* Kormilev, 1955; and for the species of *Zemira* n. sg. Also a key is given for the species of *Acoryphocoris* Usinger and Matsuda, 1959, from New Guinea, Bismarck Arch. and Solomon Is.

Maps are given for distribution of the subfamily Mezirinae, genus *Mezira* A. S. s. str., subgenus *Zemira*, and genera: *Ctenoneurus* Bergroth, *Neuroctenus* Fieber, *Arictus* Stål and *Arbanatus* Kormilev.

HISTORICAL

During the 19th century our knowledge of the family Aradidae from the Oriental and Australian Regions was very poor. A few genera and species were sporadically described by the European entomologists Fabricius, Laporte, Erichson, Montrouzier, Stål, Walker, Distant and Bergroth. A few more were described by Distant, Bergroth, Horvath, China, Kirkaldy, Van Duzee and Kirby in the first third of the 20th century. In 1938 a paper by Miller, describing an apterous genus, *Chelonocoris*, from Malaya, drew attention to the previously unrecognized phenomenon of apterism and micropterism among Aradidae. In almost all larger museums of the world apterous and micropterous specimens of Aradidae were buried among nymphs, without being recognized as adults. It is true that as early as 1864 Montrouzier described the first apterous genus, *Phloeobia*, from New Caledonia, but its apterism was overlooked by hemipterologists, hidden under the cryptic word "elytres ?". Stål, the great Swedish hemipterologist of the second half of the 19th century, had seen some apterous specimens, which bore labels in his handwriting, but he never mentioned it. Later, Bergroth, "le maître des aradids," as he was called by his contemporary colleagues, had seen them and had even named a couple of genera, but never had time to publish them before his death in 1925. At any rate, it is a merit of Miller who first published them as apterous, adult forms.

After Miller many hemipterologists began to describe apterous and micropterous aradids, giving rise to a new interest in the family as a whole. Oriental and Australian Aradidae had been treated

by Usinger, Drake, again Miller, Esaki & Matsuda, myself, and recently, Monteith. In 1957 a monograph of Aradidae of Micronesia by Matsuda & Usinger was published, and in 1959 the classical work of Usinger & Matsuda, "Classification of the Aradidae," a world-wide revision of the family was published. The same year 2 small papers by Kiritshenko and Hoberlandt appeared describing some Oriental Aradidae, and in 1965 a paper by Bloete. The monumental work by Usinger & Matsuda treats mostly the higher classification of the family to the generic level, describing new species only to validate new genera. In 1965 the late Dr Usinger offered to send me all unidentified material left over from his work, which I accepted, and started a series "Aradidae in the Bishop Museum, Honolulu." From 1967 to 1969 4 papers were published treating the Isoderminae, Prosympiestinae, Chinamyersinae, Aradinae, Calisiinae, Aneurinae and Carventinae from the Oriental Region and South Pacific. The last and the largest subfamily, Mezirinae, is treated in this paper. Besides the very rich collections of the Bishop Museum in Honolulu, specimens from the collections of the California Academy of Sciences in San Francisco, Australian Museum in Sydney, Zoological Institute of the Academy of Sciences in Leningrad, Universitetets Zoologiska Museum in Helsingfors and from the collections of the Centre O.R.S.T.O.M. in Noumea were used. Also examined were various types of Walker from the British Museum (N. H.) and of Bloete from the Rijksmuseum van Natuurlijke Historie in Leiden, types of Fabricius and Stål from the Museums in Copenhagen and Stockholm respectively, and some specimens from the U. S. National Museum in Washington, D. C.

BIOLOGICAL

Aradidae, or the flat bugs, are mostly mycetophagus insects living under the bark of decaying trees or in the litter of humid, tropical forests, though there are records of them sucking young branches of pine trees. The flattened body is well adapted to life under the loose bark, and their extremely long, coiled mouthparts permit them to reach fungi in cracks at a considerable distance.

In the tropics, and particularly among genera living in the forest litter, there is a tendency to develop brachypterism, micropterism and complete apterism. The latter 2 stages are correlated with reducing and even atrophy of the wing muscles and corresponding modification of pronotum and scutellum. The pronotum, particularly the hind lobe, becomes abbreviated and flattened, the scutellum to the contrary often becomes more gibbous. In completely apterous forms modifications go even further: the scutellum disappears and the pronotum and dorsum often develop bizarre protuberances, mostly covered with secretions accumulating dirt, which is a perfect camouflage. Another phenomenon occurring mostly in micropterous and apterous forms is the fusing of the meso- and metanotum and the first 1 or 2 tergites; even in some macropterous species in the genera *Neuroctenus* Fieber and *Ctenoneurus* Bergroth a fusing of connexiva II and III occurs in various stages of development.

Some species of the genera *Mezira* A. S. and *Neuroctenus* Fieber are gregarious and may be found in large series, but most aradids, particularly apterous species, are regularly found as single specimens or pairs.

SYSTEMATICS

As this paper is mainly faunistic in character, I have restrained myself from any changes above the generic level, following the system given by Usinger & Matsuda in the Classification of the Aradidae, correcting only clear-cut synonymy at the generic and specific level. But there are 2 cases which I left open becuase they need more study, preferably on a world-wide basis. The

first case is relation of the genera *Mezira* A. S., 1843, and *Daulocoris* Usinger & Matsuda, 1959. *Mezira* is a very heterogeneous, world-wide genus, which badly needs a world-wide revision; *Daulocoris* was separated by Usinger & Matsuda in 1959 from *Mezira* A. S., on the basis of an open labial atrium and the membrane with small tufts of hairs. Most species of *Daulocoris* have curious, subcylindrical, curved, postocular tubercles, but all these characters are not present in all species: some species, even listed by Usinger & Matsuda in *Daulocoris*, like *D. cornigera* (Kormilev), 1953, have the labial atrium split-like, as in *Mezira* species. In others, tufts of hairs on the membrane disappear; some have the postocular tubercles dentiform, acute, also like *Mezira* species. As *Mezira* is too heterogeneous already, and most *Daulocoris* species represent a clear group, I prefer to leave this question open. The second case involves the genera *Neuroctenus* Fieber, 1861, and *Ctenoneurus* Bergroth, 1887. *Ctenoneurus* was separated by Bergroth from *Neuroctenus* on the basis of a single sinus on the middle of the hind border of sternum VI in the females, whereas *Neuroctenus* has it bisinuate; also the venter is more convex and labium is produced, or produced almost beyond hind border of labial groove. Most of the *Ctenoneurus* species are more elongate, with the labium produced beyond the fore border of prosternum, and with the venter more convex, but some species from the Philippines are less convex, have shorter labiums, not produced beyond the hind border of the labial groove, and the bodies are less elongate. Conversely, some species of *Neuroctenus* have a long labium, produced over fore border of prosternum, and the hind border of sternum VI in the females is almost unisinuate in the middle. *Neuroctenus* is almost cosmopolitan, with exception of Europe, Siberia, the South Pacific and New Zealand; *Ctenoneurus* replaces it in the South Pacific and New Zealand, but both are present in Australia, New Guinea, Philippines and Eastern Indonesia; 2 species of *Ctenoneurus* were recorded from West Africa, the domain of *Neuroctenus*. The genera are closely related, but I am reluctant to synonymize them at this time because *Neuroctenus* is too heterogeneous already and it is not convenient to complicate this further until a revision of this genus as a whole is possible.

The single change on the supraspecific level which I am proposing now is separating from *Mezira* A. S. the so-called "membranacea group of species," and giving it a subgeneric rank under the name *Zemira*, new subgenus (*Zemira* is an anagram of *Mezira*). This group, distributed from Seychelles to the Society Islands and from Japan to Australia is very characteristic, having the hind border of the pronotum deeply sinuate in the middle and consequently the fore border of the scutellum is produced forward, giving it a more rhomboidal than triangular shape as in other species of *Mezira*.

DISTRIBUTION

Mezirinae are distributed all over the world with exception of colder areas. In the Oriental Region Mezirinae are spread further to the north, penetrating into the Palaearctic Region, and to the west reaching Kashmir. Only the Aradinae go further to the north. In Australia and the southern Pacific they go further to the east than any other subfamily, and only the Isoderminae go further to the south than the Mezirinae. Recently *Mezira membranace* (F.) was accidently introduced into Hawaii (Hardy 1964).

48 genera were recorded from the Oriental and Australian Regions to which 5 more are now added. Some genera, as for example *Chinessa* Usinger & Matsuda, 1959, show a surprisingly high number of species, all but a few restricted to New Guinea and adjacent islands.

It is interesting to compare the distribution of larger genera in the Oriental Region and the southern Pacific. The cosmopolitan genus *Mezira* A. S. shows a curious distribution of its subgenera: *Mezira* A. S. s. str. occurs as far north as Manchuria and the Russian Far East and as far

south as southern Australia, but is missing east of the Philippines and in New Guinea. *Zemira* n. sg. occurs to the north only as far as southern China and southern Japan, and to the south as far as Queensland and New South Wales, but to the east it was recorded from Palau Is. and through most of Melanesia and Polynesia as far as the Society Islands and it is recorded from Hawaii. *Neuroctenus* Fieber does not extend eastward of the Marianas, New Guinea, Solomon Is. and Australia. *Ctenoneurus* Bergroth, a related genus, occurs in Borneo, the Philippines, New Guinea, Australia, Solomon Is., New Caledonia, Fiji, New Zealand and Samoa. *Arictus* Stål occurs in Laos and Sumatra to Palau, Marianas and Samoa, and from Taiwan to Fiji, New Caledonia and Australia. *Arbanatus* Kormilev, consisting of numerous small species easily carried by wind, apparently spread from southern China and the Malay Peninsula through Indonesia, Micronesia and New Guinea to Fiji, Samoa and even Rapa I. (See maps, p. 159–161).

Acknowledgments: Thanks are extended firstly to Dr Roland W. Force, Director of the B. P. Bishop Museum, Honolulu, and Dr J. Linsley Gressitt, Chairman of the Department of Entomology at the same Museum, for the privilege of studing the rich collection of Aradidae under their care. I am also indebted to Dr Paul H. Arnaud, Jr., Associate Curator and Chairman of the Department of Entomology, California Academy of Sciences in San Francisco; to Dr Max Beier, Hofrat at the Naturhistorisches Museum in Vienna; to Dr Paul Cochereau, Entomologist—Centre O.R.S.T.O.M. in Noumea, New Caledonia; to Dr Richard C. Froeschner, Curator and Supervisor of Hemiptera and Hymenoptera at the U. S. National Museum in Washington, D. C.; to Dr I. M. Kerzhner, entomologist at the Zoological Institute of the Academy of Sciences in Leningrad; to Dr Martin Meinander, Keeper of Entomology at the Universitetets Zoologiska Museum in Helsingfors, and to Dr C. N. Smithers, Curator of Insects at the Australian Museum in Sydney, for sending me unidentified Aradidae from the collections under their care. I also express my gratitude to Mrs G. M. Black, entomologist at the British Museum (N. H.), London, for the loan of the various types of Walker; to Dr Peter H. van Doesburg, Jr. at the Rijksmuseum van Natuurlijke Historie in Leiden for sending various types of Bloete; to Dr Per Inge Persson at the Naturhistoriska Riksmuseum, Stockholm, for sending the type of *Brachyrhynchus nasutus* Stål, and to Dr Bφrge Petersen at the Universitetets Zoologiske Museum in Kopenhagen, for sending the type of *Mezira membranacea* (Fabricius), which helped me very much in clearing up the synonymy involved.

Key to genera of the Oriental, Australian and Pacific Mezirinae

1 (2). Apterous, micropterous or brachypterous. Abdomen without glabrous central dorsal plate in apterous and micropterous species.....2
Macropterous. Abdomen with a distinct, more or less glabrous, central dorsal plate area bounded by carinae and covered by hemelytra at rest.....30

2 (1). Spiracles II not visible on ventral connexival plate.....3
Spiracles II plainly visible.....6

3 (2). Eyes stalked. Head with short but distinct preocular tubercles; pronotum with 3 prominent tubercles on each side, and a deep median sulcus. Apterous (Java).....
.....**Cremastaptera** Usinger & Matsuda, 1959
Eyes not stalked. Preocular tubercles absent, pronotum not as above.....4

4 (3). Small, less than 3.0 mm long; antennal segment III the longest; pronotum with crescent-shaped ridges laterally. (India).....**Kiritshenkiessa***
Large, 10.0 mm, or more long; antennal segment I by far the longest; pronotum without crescent-shaped ridges 5

*Described as new.

5 (4). A small oval callosity in front of hind acetabula. Spiracles all sublateral, except those of segment VIII. Apterous. (Borneo).....**Aphyseteres** Usinger & Matsuda, 1959

Callosity in front of hind acetabula absent. Spiracles V to VIII lateral or sublateral. Apterous. (Malaya).....**Chelysocoris** Miller, 1949

6 (2). Rostral atrium open.....7

Rostral atrium closed, slit-like.....12

7 (6). Body cylindrical; scutellum elongate-triangular with a wide, convex, median ridge; antennal segments III and IV semifused. Brachypterous. (Australia).....
.....**Aspisocoris** Kormilev, 1967

Body not cylindrical; scutellum different; antennal segments III and IV clearly separated.....8

8 (7). Connexiva II and III separated.....9

Connexiva II and III fused.....10

9 (8). Eyes stalked. Postocular spines present. Central dorsal plate not reaching tip of scutellum. Brachypterous. (New Zealand).....**Woodwardiessa** Usinger & Matsuda, 1959

Eyes not stalked. Postocular spines absent. Central dorsal plate reaching tip of scutellum. Micropterous or macropterous. (New Guinea).....**Caecicoris** Kormilev, 1957

10 (8). Scutellum with a pair of subflattened lobes in middle of front border extending forward over the base of pronotum. Brachypterous. (Indonesia, Micronesia).....
.....**Mastigocoris** Matsuda & Usinger, 1957

Scutellum without such lobes. Micropterous.....11

11(10). Eyes stalked. Sides of mesonotum (scutellum) concave. (Fiji).....
..... **Phanocoris** Usinger & Matsuda, 1959

Eyes not stalked. Sides of mesonotum (scutellum) convex. (Micronesia, New Guinea).....
.....**Artabanellus** Matsuda & Usinger, 1957

12 (6). Scutellum not distinguishable as a separate plate. Apterous.....13

Scutellum distinct. Micropterous or brachypterous.....19

13(12). Head subcylindrical; antenniferous tubercles obsolete, not projecting. (India, Malaya, Indonesia).....**Chelonocoris** Miller, 1938

Head broad; antenniferous tubercles always distinct.....14

14(13). Postocular tubercles absent. (Australia).....**Chelonoderus** Usinger, 1941

Postocular tubercles present, sometimes reduced or subangulate.....15

15(14). Pronotum elevated in the middle. (Australia).....**Drakiessa** Usinger & Matsuda, 1959

Pronotum with a distinct median sulcus, or depression.....16

16(15). Metathoracic scent gland openings not visible from above.....17

Metathoracic scent gland openings just visible from above.....18

17(16). Mesonotum completely fused posteriorly with tergum I, forming a wide, uninterrupted ridge, which is smooth, without granulation. (New Caledonia).....
.....**Phloeobia** Montrouzier, 1864

Mesonotum separated posteriorly from tergum I by a fine, shallow, transverse sulcus; the former with a distinct, rough granulation. (Australia).....**Scirrhocoris** Kormilev, 1965

18(16). Anterolateral angles of pronotum rounded and produced forward as far as collar. Central dorsal plate of abdomen forming a high plateau, with wide median ridge in the area of dorsal scent glands, surrounded by 8(4 + 4) deep, round depressions. (Australia).....
.....**Argocoris** Kormilev, 1967

Anterolateral angles of pronotum rounded, but receding, not reaching collar; 2(1 + 1) small lobes placed in middle of lateral border. Central, dorsal plate forming a high hump with a cross-shaped elevation in middle of terga II to IV, and a sub-triangular ridge, sloping backward, on terga V and VI medially. (Australia).....
.....**Aegisocoris** Kormilev, 1967

19(12). Postocular tubercles absent.....20

Postocular tubercles present....26
20(19). Eyes stalked. Pronotum with 4(2 + 2) finger-like processes laterally. Legs unarmed. Brachypterous. (Sumatra)....**Lophocoris** Usinger & Matsuda, 1959
Eyes not stalked. Pronotum not as above; legs armed or not....21
21(20). Legs unarmed....22
Legs with spines....23
22(21). Ovate, attenuated anteriorly. Spiracles VI to VIII, or VII to VIII lateral and visible from above. (India, Ceylon)....**Parapictinus** Kormilev, 1956
Elongate ovate, abdomen with parallel sides. Spiracles II to VII ventral and not visible from above, VIII lateral and visible. Brachypterous or macropterous. (Taiwan)....**Pseudoartabanus** Esaki & Matsuda, 1952
23(21). Stridulation apparatus present. Brachypterous or macropterous. (Burma to Fiji and New Caledonia)....**Artabanus** Stål, 1865
Stridulation apparatus absent....24
24(23). Pronotum with 4(2 + 2) lateral processes directed sideways. ♂♂ with a large metapleural spine directed sideways. ♀♀ without such spine, or with a small tubercle. Brachypterous or macropterous. (Sumatra, Borneo, Philippines)....**Dimorphacantha** Usinger & Matsuda, 1959
Pronotum without such processes; ♂♂ without metapleural spines....25
25(24). Pronotum with 2(1 + 1) high, round tubercles on fore lobe laterally, at anterolateral angles; the latter rounded. Brachypterous or macropterous. (New Guinea)....**Scironocoris** Kormilev, 1957
Pronotum with 2(1 + 1) oblique, longitudinal ridges on fore lobe laterally; anterior borders truncate, anterolateral angles blunt. Brachypterous. (Iran)....**Rustem** Kormilev, 1957
26(19). Larger species, over 5.0 mm long. Anterior process of head robust and produced beyond tip of antennal segment I....27
Smaller species, less than 5.0 mm long. Anterior process more slender and generally not reaching tip of antennal segment I....28
27(26). Micropterous. Anterior process of head very robust and only slightly incised anteriorly; PE-VII rounded or angular, but not lobate. Spiracles II to VII ventral and not visible from above, VIII lateral and visible. (Australia)....**Neophloeobia** Usinger & Matsuda, 1959
Brachypterous or macropterous. Anterior process narrower and forked anteriorly; PE-VII produced backward as long, apically rounded lobes. Spiracles VI to VIII lateral and visible from above. (New Guinea)....**Chinessa** Usinger & Matsuda, 1959
28(26). Spiracles II lateral and clearly visible from above. Brachypterous or macropterous. (Southern China to Society Is. and Rapa I.)....**Arbanatus** Kormilev, 1955
Spiracles II ventral and not visible from above....29
29(28). Connexiva II and III fused. Micropterous. (Australia)....**Micromezira** Kormilev, 1967
Connexiva II and III separated. Brachypterous or macropterous. (Cosmopolitan, except colder areas)....**Mezira** Amyot & Serville, 1843
30 (1). Hind tibiae curved and file-like above. Venter with a prominent, curved, longitudinal carina, or carinae and with a few shorter carinae on either side of sternum IV....31
Hind tibiae and venter not as above....32
31(30). Genae long, spine-like. Connexival segments spined or lobed laterally. (New Guinea)....**Rossius** Usinger & Matsuda, 1959
Genae short, scarcely produced. Connexivum not, or only slightly lobed, and then only on posterior segments. (Burma to Fiji, New Caledonia and Australia)....**Artabanus** Stål, 1865
32(30). 4th, 5th and 6th sternites each with a continuous, transverse carina at base; rarely is carina reduced or represented by a row of granules, in which case venter has a distinct,

sublateral, longitudinal fold, and the ♀♀ have the hind margin of sternum VI trisinuate 33

4th, 5th and 6th sternites without a transverse carina; sometimes with a row of granules, but in such cases without above combination of characters.....35

33(32). Body thick, sides subparallel or parallel. Labium mostly reaching prosternum. (Borneo to Australia, New Zealand and Samoa).....**Ctenoneurus** Bergroth, 1887

Body thin, sides usually convex, rounded. Labium rarely reaching prosternum.....34

34(33). Genae only slightly longer than clypeus, rarely longer. Anterolateral angles of pronotum rounded and only slightly produced forward, not reaching hind border of eyes. Lateral borders of abdomen never strongly lobate, PE-VII angles never produced far beyond paratergites. (Oriental Region, not recorded eastward of the Marianas—New Guinea—Solomon Is.—Australia).....**Neuroctenus** Fieber, 1861

Genae long and acute. Anterolateral borders of pronotum strongly expanded and reflexed. Lateral borders of abdomen lobate, PE-VII angles produced far beyond paratergites. (New Guinea).....**Dimifaia***

35(32). 6th sternite of ♀ trisinuate posteriorly, but sterna IV, V and VI without transverse carina at base; genae seen in profile, bent upward. (South China).....**Yangiella** Hsiao, 1964

6th sternite of ♀ not trisinuate; genae seen in profile not bent upward.....36

36(35). Body elongate, constricted in middle in both sexes. Metasternum separated from metapleura by a deep, oblique sulcus; hypopygium (♂) flattened and much shorter than large paratergites; segment IX (♀) shifted on ventral side below small tergum VIII, also much shorter than large paratergites. (New Caledonia).....**Pelecoris***

Body less elongate and not constricted in middle. Paratergites smaller, hypopygium and segment IX not as above.....37

37(36). Very large, over 14.0 mm long. Femora with a few teeth inferiorly. ♂♂ with a dense, golden, or brown tomentum on sterna III and IV laterally, and most of sterna V and VI. (Borneo, Philippines).....**Chrysodaspis***

Generally smaller species, with exception of a few species of *Mezira* A. S. and *Kema* Kormilev. ♂♂ without such tomentum.....38

38(37). Each femur with a single, prominent, preapical spine.....39

Femora usually unarmed, or, rarely hind, or middle and hind femora armed.....40

39(38). Lateral borders of pronotum with processes directed sideways, deeply sinuate between them. ♂♂ with strong metapleural spines directed sideways. (Borneo, Java, Philippines).....**Dimorphacantha** Usinger & Matsuda, 1959

Lateral borders of pronotum without processes, anterolateral angles blunt. ♂♂ without metapleural spines. (New Guinea).....**Scironocoris** Kormilev, 1957

40(38). Midlateral glabrous areas included within tergal disc (central dorsal plate); carinae delimiting the latter located along sutures that separate connexivum. Size usually small, 3 to 5 mm, rarely 7.0 mm.....41

Midlateral glabrous areas exposed, located outside of the carinae delimiting central dorsal plate, and occupying area between carinae and sutures that separate them from the connexivum. Size usually more than 7.0 mm.....48

41(40). Spiracles II lateral and clearly visible from above.....42

Spiracles II ventral or obsolete.....46

42(41). Corium extending to base of connexival segment IV; connexiva II and III fused; tergum III with a sharply defined, broad, longitudinal, depressed area at middle. (Borneo)... .....**Dolichothyreus** Usinger & Matsuda, 1959

Corium shorter, not reaching connexivum IV; connexiva II and III usually separated; tergum III not as above.....43

43(42). Labial atrium open. (Ceylon and S. China to Samoa and Australia).....

.....**Chiastoplonia** China, 1930

Labial atrium closed, split-like, rarely somewhat open.....44

44(43). Anterior process of head moderately developed, distinctly surpassing level of labial atrium. (S. China to Rapa I.).....**Arbanatus** Kormilev, 1955

Anterior process of head reduced, not surpassing apex of labial atrium.....45

45(44). Corium short, reaching only to level of apex of scutellum; posterior disc of pronotum evenly granulate, without sinuous, transverse ridge. (Sumatra, New Guinea, Bismarck Arch.).....**Aphelocoris** Usinger & Matsuda, 1959

Corium longer, produced on outer margin well beyond level of apex of scutellum; posterior disc of pronotum with 1 or 2 sinuous, transverse ridges of setigerous granules. (India to New Guinea).....**Acoryphocoris** Usinger & Matsuda, 1959

46(41). Spiracles II obsolete.....47

Spiracles II ventral. (Burma, Viet Nam, New Guinea).....**Leiocoris***

47(46). Antennae thick; anterolateral angles of pronotum expanded and obliquely truncate; membrane without veins. (New Guinea, Australia).....**Clavicornia** Kormilev, 1960

Antennae slender. Anterolateral angles of pronotum not expanded; membrane with veins. (Seychelles and Japan to Micronesia, New Guinea and Australia).....
.....**Glochocoris** Usinger & Matsuda, 1959

48(40). Spiracles II obsolete, not visible.....49

Spiracles II exposed.....50

49(48). Genae scarcely produced beyond apex of clypeus; postocular spines small, directed laterally; pronotum with a tooth in lateral notch. (S. China, Taiwan, Malay Peninsula).....
.....**Odontonotus** Kormilev, 1955

Genae and postocular spines long, latter directed posteriorly; pronotum without tooth in lateral notch. (Malay Peninsula, Boutan, Ceram, New Guinea, Bismarck Arch.).....
.....**Barcinus** Stål, 1873

50(48). Antenniferous tubercles bifid at apex; margin of each connexivum with 4 distinct, blunt tubercles. (Borneo, Philippines).....**Acantharadus** Banks, 1909

Antenniferous tubercles not bifid, connexiva different.....51

51(50). Postocular tubercles absent.....52

Postocular tubercles present, mostly well developed.....53

52(51). Hind angles of connexiva, particularly on posterior segments, with 2 distinct spines, or tubercles; middle and hind femora usually with 2 rows of teeth; if the legs are unarmed, then PE-VI angles with 2 distinct spines. (Sumatra, Java, Borneo).....
.....**Crimia** Amyot & Serville, 1843

Hind angles of connexiva without spines; legs unarmed. (S. China).....**Wuiessa** Hsiao, 1964

53(51). Membrane without distinct veins; pronotum with an angulate or rounded lobe laterally in front of humeri.....54

Membrane with veins; pronotum without such lobes.....55

54(53). Membrane smooth; head without postocular spines. (New Guinea).....
.....**Caecicoris** Kormilev, 1957

Membrane rough; head with postocular spines. (Russian Far East, Ceylon, Burma, Malay Peninsula, Java, New Guinea).....**Usingerida** Kormilev, 1955

55(53). Scutellum with a pair of broad, granulate lobes at base medially extending forward over basal margin of pronotum; postocular spines slender, subcylindrical, extending outward beyond eyes.....56

Scutellum without such lobes; postocular spines not as above.....57

56(55). PE-angles of connexiva briefly produced into double lobes with closely packed tubercle-like granules. (Taiwan and Laos to Micronesia, Fiji and Australia).....**Arictus** Stål, 1870

PE-angles of connexiva strongly produced into tapering lobes, which are single, not double

on edges. (Celebes, Philippines).....**Kema** Kormilev, 1955

57(55). Genae strongly produced forward well beyond clypeus as stout, divergent spines. (Ceram, New Guinea, Bismarck Arch.).....**Chinessa** Usinger & Matsuda, 1959

Genae not as above.....58

58(57). Membrane mostly beset with prominent clumps of hairs or tubercles; body more or less covered with dense tomentum; labial atrium open or closed. (Taiwan, S. China and Burma to Philippines, New Guinea and Bismarck Arch.).....**Daulocoris** Usinger & Matsuda, 1959

Membrane naked, or with scattered individual hairs only; body generally without tomentum 59

59(58). Postocular spines absent. (Taiwan).....**Pseudoartabanus** Esaki & Matsuda, 1952

Postocular spines present.....60

60(59). Head strongly produced behind eyes as foliaceous lobes bent forward and surpassing level of front margin of eyes. (Java, Africa).....**Oroessa** Usinger & Matsuda, 1959

Head with shorter, acute or blunt postocular tubercles. (Cosmopolitan excepting cold areas).....**Mezira** Amyot & Serville, 1843

a. Hind border of pronotum only slightly sinuate. (Cosmopolitan excepting cold areas) .....**Mezira** s. str.

Hind border of pronotum deeply sinuate in middle. (Oriental Region, southern Pacific Islands and Australia).....**Zemira** n. sg.

Measurements: in ratios the first figure indicates the length, and the second the width of measured portion; for antennal segments, the figures in parentheses indicate the width of relative segment.

Genus **Kiritshenkiessa** Kormilev, new genus

Type-species: *Kiritshenkiessa spinipes* n. sp.

Elongate ovate, roughly sculptured on upper surface, naked and shiny. Apterous.

Head much shorter than its width across eyes; anterior process short, clypeus strongly raised at base, sloping and tapering anteriorly, flanked by deep sulci, reaching basal 1/3 of antennal segment I. Antenniferous tubercles short, blunt, convergent, reaching slightly over base of antennal segment I. Eyes large, globose; not stalked. Postocular borders unarmed, slightly convex, convergent posteriorly. Vertex with "V"-shaped rows of rough tubercles. Antennae thick, antennal segments I and IV equal in length, very thick, II the shortest and III the longest. Labial atrium closed, split-like; labium short, not reaching base of head.

Pronotum rectangular, much shorter than wide; collar distinct, slightly sinuate anteriorly; anterolateral angles rounded, granulate; lateral borders subparallel, slightly converging posteriorly; hind border slightly sinuate. Disc with a thin median sulcus anteriorly, which becomes wider and deeper posteriorly; it is flanked by rough granules and ridges. Laterad of median sulcus are placed 2(1 + 1) oblique callosities, and further toward the borders 2(1 + 1) high, stout, crescent-shaped, granulate ridges.

Mesonotum in the shape of scutellum, raised and roughly granulate, completely fused posteriorly with tergum I. Granules arranged into 4(2 + 2) longitudinal ridges.

Metanotum consisting of 2(1 + 1) round plates separated by mesonotum; their lateral borders short and carinate, discs uneven.

Abdomen ovate, longer than wide; tergum I raised, roughly uneven, fused posteriorly with tergum II; the latter with a subtriangular, median, smooth portion, and with 2(1 + 1) lateral, uneven portions. Central dorsal plate, consisting of terga III to VI, strongly raised medially, with summit at tergum V, sloping forward and backward. Laterad of median ridge are placed 4(2 + 2) longitudinal rows of callosities separated from each other by transverse sulci. Tergum VII strongly raised in middle for reception of hypopygium in ♂, its posterior border deeply sinuate; disc with a transverse row of rough granules in middle. Connexivum moderately wide, horizontal. Connexivum II very long, triangular, fused posteriorly with connexivum III; other

connexiva separated from each other by fine sulci. PE-angles II, III, and particularly VI, raised, PE-VII forming small, rounded lobes directed posteriorly. Discs of connexiva uneven. Spiracles II not visible, III to VI ventral, placed close to margin; VII sublateral, placed on tubercle and visible from above; VIII terminal. Paratergites (♂) short, almost globose, reaching middle of hypopygium; the latter subpyriform, transversely depressed at base, convex and granulate on disc, rounded posteriorly.

Metathoracic scent-gland openings thin, strongly curved backward inferiorly and bent over on dorsal surface, clearly visible from above.

Legs. Trochanters free; femora unarmed, granulate; fore tibiae with strong, preapical spines inferiorly; all tibiae granulate exteriorly; tarsi either broken off, or so glued as to be undiscernible.

This genus is dedicated to the late eminent Russian hemipterologist, Prof. Dr Alexander N. Kiritshenko, who contributed so much to our knowledge of Palaearctic Aradidae.

Kiritshenkiessa n. g. is related to *Cremastaptera* Usinger & Matsuda, 1959, from which it may be separated by unstalked eyes, 2(1 + 1) lateral crescent-shaped ridges on the pronotum, differently shaped mesonotum and central dorsal plate of abdomen, and by the armed fore tibiae.

Kiritshenkiessa spinipes Kormilev, new species Fig. 1.

♂. Uniformly testaceous; antennae, labium, canals of metathoracic scent-gland openings, and legs yellowish brown.

Head 24:31; relative lengths of antennal segments I to IV: 15(7.5):7.5(5):18(5):15(7); pronotum 23:48; width of metanotum 58; abdomen across segment IV (maximum width) 80:66; hypopygium 15:14.

Total length: 2.45 mm; width of pronotum 0.80 mm; width of abdomen 1.10 mm.

Holotype ♂ (Zoological Institute, Academy of Sciences, USSR, Leningrad) India, Madura, Shembaganur, collector not known.

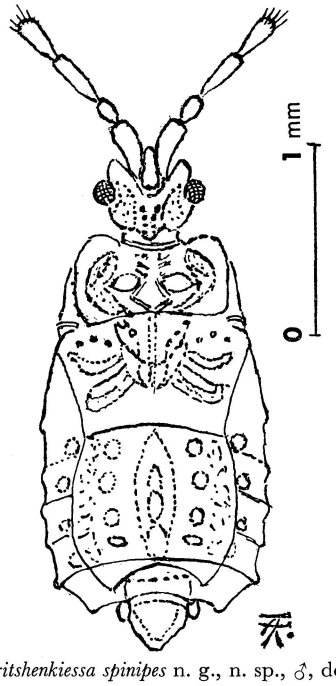


Fig. 1, *Kiritshenkiessa spinipes* n. g., n. sp., ♂, dorsal aspect.

Genus **Caecicoris** Kormilev, 1957

Caecicoris Kormilev, 1957, *Philip. J. Sci.* **85**(3): 398.
Zeugocoris Usinger & Matsuda, 1959, Class. Aradidae: 310.
Caecicoris: Montheith, 1969, *J. Austral. Ent. Soc.* **8:** 87.

This small genus from New Guinea has only 1 species, but has macropterous and micropterous forms which were found "in copula" by Monteith. The micropterous form was described in 1957 as *Caecicoris oviventris* Kormilev, and the macropterous by Walker as *Crimia microcera* in 1873. Usinger & Matsuda established for *Crimia microcera* a new genus, *Zeugocoris*, in 1959. In 1955, not knowing the species of Walker, I described it as *Artabanus inermis*, hence the following synonymy:

Caecicoris microcerus (Walker), 1873
Crimia microcera Walker, 1873, *Cat. Hem. Het. Brit. Mus.* **7:** 21.
Artabanus inermis Kormilev, 1955, *Ann. Mag. Nat. Hist.* ser 12, **8:** 201, f. 10–12. **New Synonymy**
Caecicoris oviventris Kormilev, 1957, *Philip. J. Sci.* **85**(3): 399, f. 14–16.
Zeugocoris microcerus: Usinger & Matsuda, 1959, Class. Aradidae: 312, f. 88.
Caecicoris microcerus: Monteith, 1969, *J. Austral. Ent. Soc.* **8:** 87.

In the collections of the B. P. Bishop Museum are 3 specimens of both forms, all from New Guinea.

Genus **Mastigocoris** Matsuda and Usinger, 1957

This small genus has only 2 species: 1 from Saipan (Marianas), the type species, and another from Java and Sumatra, mentioned, but not described, by Usinger & Matsuda (1959: 222). I propose to name this species after the late Dr Usinger.

The genus *Mastigocoris* Matsuda & Usinger, 1959, is related to 2 other small genera: *Artabanellus* Matsuda & Usinger, 1957, and *Phanocoris* Usinger & Matsuda, 1959, all 3 having an open labial atrium, but it may be separated from them by curious lobes (1 + 1) on the fore border of the scutellum overlapping the hind border of the pronotum.

Mastigocoris usingeri Kormilev, new species

♂. Elongate ovate, naked. Brachypterous.

Closely related to *Mastigocoris angulatus* Matsuda & Usinger, 1957, but smaller, and with different relative length of antennal segments. Color is lighter: testaceous, antennae and legs yellowish brown, tarsi and labium yellow.

Measurements: head ♂ 35:36, ♀ 40:42; relative length of antennal segments I to IV: ♂ 15:12:18:16, ♀ 16:12:19:18; pronotum ♂ 25:60, ♀ 30:68; scutellum ♂ 21:35, ♀ 30:40; abdomen ♂ 95:70, ♀ 107:90; hypopygium ♂ 20:29.

Spiracles II to VI ventral, VII and VIII lateral and visible from above.

Total length: ♂ 3.0, ♀ 3.33 mm; width of pronotum ♂ 1.00, ♀ 1.13 mm; width of abdomen ♂ 1.17, ♀ 1.50 mm.

Holotype ♂ (Bishop 8965), Java, Buitenzorg (Bogor), VI.1907, F. Muir coll., with Usinger's label "Phanerocoris simplex, det. R. L. Usinger, '48", a *nomen nudum.*

Allotype ♀, and paratypes 13 ♂♂ & 10 ♀♀, and 29 nymphs, collected with holotype (Bishop); 1 ♂, Borneo, Sarawak, T. C. Maa coll., probably belongs here, but is without head and unidentifiable.

Genus **Artabanus** Stål, 1865

This genus, widely spread in SE Asia and the Western Pacific, was known only from macropterous species; now I am able to add a few brachypterous and even micropterous species.

Artabanus is characterized by the lack of postocular tubercles, and by the stridulatory apparatus, consisting of a file-like carina on the upper side of the hind tibiae, and by a few longitudinal carinae of various lengths on sterna III to V laterally.

KEY TO SPECIES OF *Artabanus* STÅL

1 (2). Micropterous or brachypterous species.....2
Macropterous species.....7
2 (1). Micropterous species, hemelytra reduced to small pads.....3
Brachypterous species, hemelytra covering metanotum.....6
3 (2). Spiracles VI ventral, placed far from border.....4
Spiracles VI ventral, but placed near the border, or sublateral.....5
4 (3). Antennal segment I almost as long as III (24:25), (New Guinea).....**micropterus***
Antennal segment I distinctly shorter than III (17:21) (New Guinea).....**degeneratus***
5 (3). Spiracles II to V ventral, placed far from border; VI ventral, placed near the border. (Bismarck Arch.; New Britain).....**gazellensis***
Spiracles II ventral, placed far from border; III to V progressively nearer border, VI placed close to border, though not visible from above. (Bismarck Arch.; Umboi)..... **umboiensis***
6 (2). Spiracles II to VI ventral, placed far from border; eyes stalked. (New Guinea).....**brachypterus***
Spiracles II ventral, placed far from border; III to VI progressively nearer border; eyes not stalked. (Fiji Is.).....**fijiensis***
7 (1). Ventral side of body with dispersed, round, shiny tubercles of different size. (Malay Peninsula).....**tuberculatus** Kormilev, 1967
Ventral side of body without such tubercles; if such tubercles present, then few and placed in pairs.....8
8 (7). Pronotum truncate anteriorly and posteriorly, anterolateral angles forming a right angle, neither produced forward, nor laterally (Burma: Tenasserim)...**breviscutum** Bergroth, 1889
Pronotum not so shaped.....9
9 (8). Pronotum truncate anteriorly and posteriorly, anterolateral angles forming an obtuse angle; anterolateral borders produced as an obtuse angle. (Burma, Sumatra)..... .....**excelsus** Bergroth, 1892
Pronotum not so shaped.....10
10 (9). Pronotum much narrowed anteriorly, fore lobe with 1 strong tooth laterally. (Burma)... .....**setulosus** Bergroth, 1892
Pronotum not so shaped.....11
11(10). Head about as long as its width across eyes, or shorter.....12
Head distinctly longer than its width across eyes.....23
12(11). Larger species, 9.0 mm or more.....13
Smaller species, 8.5 mm or less.....16
13(12). Anterior process of head reaching tip of antennal segment I; anterolateral angles of pronotum expanded, lamellate, produced forward and laterally. (Fiji)..... .....**mcfarlandi** Kormilev, 1967
Anterior process much shorter, at most reaching 3/4 of antennal segment I; anterolateral angles of pronotum not lamellate, truncate anteriorly, or produced into 2 teeth.....14
14(13). Anterior process of head longer, reaching 3/4 of antennal segment I; postocular border with a large tubercle posteriorly; anterolateral angles of pronotum produced forward as 1 tooth and laterally as another. (Viet Nam, Borneo).....**halaszfyi** Kormilev, 1955
Anterior process shorter, reaching at most 3/5 of antennal segment I; postocular border without tubercle; anterolateral angles of pronotum with 2 teeth.....15

*Described as new.

15(14). Anterior process of head reaching only middle of antennal segment I; stridulation apparatus with 1 sharp, long carina on sternum IV and 6 short carinae mesad of it. (New Guinea).....**obscurus** Bloete, 1965

Anterior process reaching 3/5 of antennal segment I; stridulation area with 1 long carina flanked by 2(1 + 1) lower, long carinae, and a few short ones laterad of them. (New Guinea) .....**montanus***

16(12). Anterolateral borders of pronotum obliquely truncate, without teeth. (New Guinea)..... .....**truncatus** Kormilev, 1967

Anterolateral borders of pronotum produced into 2 more or less developed teeth.....17

17(16). Abdomen (♂) widening from segment II to III, then narrowed from IV to V, widening again at VI, and abruptly narrowed at VII; PE-VI angles forming blunt lobes (♀♀ unknown). (Solomon Is.).....**robustus***

Abdomen with parallel, or subparallel sides, abruptly narrowed at segment VII.....18

18(17). Abdomen slightly convex in both sexes; tergum VII without small teeth laterally; middle and hind femora with teeth. (Solomon Is.: Rennell I.).....**rennellensis** Kormilev, 1968

Abdomen with parallel sides (♂), or slightly convex (♀); tergum VII (♂) with small teeth laterally; all, or only hind femora armed.....19

19(18). All femora with spines; larger species (7–8.5 mm). [Halmahera (Gilolo), Amboina]..... .....**varius** (Walker), 1873

At most hind femora with spines, or teeth.....20

20(19). Hind femora with a row of small teeth, but without larger spines. (Australia)..... .....**australis** Kormilev, 1958

Hind femora always with a spine, or tooth, sometimes accompanied by a row of very small teeth.....21

21(20). Larger species (6.5–7.0 mm).....**bilobiceps** Lethierry, 1888

a. Labial atrium, anterior and posterior ends of labial groove, and posterior border of metasternum, each with a pair (1 + 1) of round, shiny tubercles. (Burma, Thailand, Borneo, Philippines).....**bilobiceps** s. str.

Round, shiny tubercles absent. (Palau, New Guinea, Bismarck Arch.)..... .....**bilobiceps papuasicus** Kormilev, 1967

Smaller species, less than 6.0 mm.....22

22(21). Head as long as its width across eyes; anterior process distinctly bilobed; antennae as long as head and pronotum together; sternum IX (♀) incised laterally for reception of 2(1 + 1) round tubercles on sternum VIII. (Simalur W of Sumatra).....**brevis** Bloete, 1965

Head shorter than its width across eyes (24:26); anterior process only slightly incised apically; antennae shorter than head and pronotum together (48:51.5); sternum IX (♀) entire laterally, and sternum VIII without tubercles. (Caroline Is.)..... .....**lativentris** Esaki & Matsuda, 1951

23(11). Body elongate ovate in both sexes.....24

Body subtriangular (♂), or triangular (♀).....27

24(23). Large species, over 11.0 mm; anterolateral angles of pronotum expanded, lamellate, produced forward and laterally, forming a blunt tooth anteriorly and rounded lobe laterally. (Ceram, New Guinea, Bismarck Arch., Solomon Is., New Hebrides, New Caledonia).....**doreicus** (Walker) 1873 and **sinuatus** Stål, 1873[3]

Smaller species, 8.0 mm or less; anterolateral angles of pronotum denticulate or truncate, never lamellate.....25

25(24). Head much longer than its width across eyes (44:37); anterior process almost reaching tip of antennal segment I; anterolateral angles of pronotum angular. (Philippines)..... .....**geniculatus** Stål, 1870

Head shorter (35:32); anterior process not reaching tip of antennal segment I; anterolateral

[3]*A. sinuatus* Stål, 1873, is identical with *A. doreicus* (Walker), 1873, but I could not determine which has priority.

angles of pronotum tridentate.....26

26(25). Postocular borders with a small tooth; pubescense of body extremely short, inconspicuous. (Viet Nam) .....**denticeps***

Postocular borders without tooth; pubescense very conspicuous. (Solomon Is.)..... ..... **sexdentatus***

27(23). Spiracles VI lateral, or sublateral, and visible from above.....28

Spiracles VI ventral and not visible from above.....29

28(27). Head much longer than its width across eyes (40:33); PE-VI angles rectangular, with blunt tip; PE-VII almost reaching middle of paratergites; the latter dentiform, almost reaching tip of hypopygium (♂), or produced beyond tip of segment IX (♀). (Solomon Is.: Guadalcanal).....**victor***

Head not so long (♂ 35:33, ♀ 40:36); ♂ PE-VI angles acute, dentiform; PE-VII very small, also acute, reaching 2/3 of paratergites; the latter curved, subcylindrical, truncate apically; ♀ antennae shorter, only 2.3 as long as head wide across eyes; paratergites relatively shorter, regularly narrowed toward tips; lateral processes of segment IX (valves) also shorter. (Solomon Is.: Malaita, New Georgia).....**gloriosus***

29(27). Smaller species, ♀ less than 8.5 mm; PE-VII angles shorter, not reaching middle of paratergites; the latter as long as segment IX (♂ unknown). (Solomon Is.: Kolombangara I.) .....**superbus***

Larger species, ♀ over 11.0 mm; PE-VII angles longer, reaching tip of segment IX; the latter shorter than paratergites (♂ unknown). (Solomon Is.: Santa Isabel).....**magnificus***

Artabanus micropterus Kormilev, new species Fig. 2, a & b.

♂. Elongate ovate, with subparallel sides, strongly converging anteriorly, and rounded posteriorly. Body densely punctured and with dispersed, short, erect bristles, which are longer on femora. Micropterous.

Head as long as its width across eyes (♂ 42:42, ♀ 43:43). Anterior process strong, with parallel sides, deeply cleft anteriorly, reaching 3/4 of antennal segment I. Antenniferous tubercles dentiform, acute, slightly divergent. Eyes semiglobose, moderately protruding. Postocular borders straight, strongly converging. Vertex with 2(1 + 1) parallel ridges. Antennae moderately stout, relative length of antennal segments I to IV: ♂ 24:14:25:13, ♀ 25:14:26:14. Labium reaching hind border of labial groove, which is closed posteriorly; labial atrium slightly open.

Pronotum 1/3 as long as its maximum width (♂ 20:60, ♀ 19:60). Collar thin, indistinctly separated from disc; anterior borders produced forward beyond collar and sinuate; anterolateral angles forming 2(1 + 1) teeth, directed obliquely sideways; lateral borders forming angular projection just behind anterolateral teeth, then slightly sinuate; hind border convex, sinuate in middle; fore disc with 2(1 + 1) oblique, low ridges in middle, and with 2(1 + 1) semiobliterated ridges laterally; interlobal depression weak; hind disc 3 times shorter than fore disc and punctured.

Scutellum subtriangular, half as long as its width at base (♂ 26:50, ♀ 28:57); lateral borders slightly sinuate in middle, basal border convex medially; disc with a weak median carina.

Metanotum forming 2(1 + 1) large, transversely ovate plates, separated from lateral borders by connexiva II.

Hemelytra reduced to small, crescent-shaped pads; laterad of them upper portions of metathoracic scent-gland openings slightly visible.

Abdomen longer than its maximum width across segment II (♂), or V (♀). Lateral borders subparallel, slightly sinuate (♂), or slightly convex (♀). Connexivum wide and slightly reflexed; PE-angles barely protruding; PE-VI more protruding and rounded (♂), or slightly protruding and blunt (♀); PE-VII forming angular lobes reaching basal 1/3 of paratergites (♂), or small, angular projections, barely passing base of paratergites (♀). Tergum I consisting of 2(1 + 1) transverse, crescent-shaped plates; central dorsal plate consisting of terga II to VI, slightly convex, and raised medially on terga IV-V (♂), or IV-VI (♀). Limit between terga II and III semiobliterated, limits between terga III to VI obliterated. Tergum VII strongly

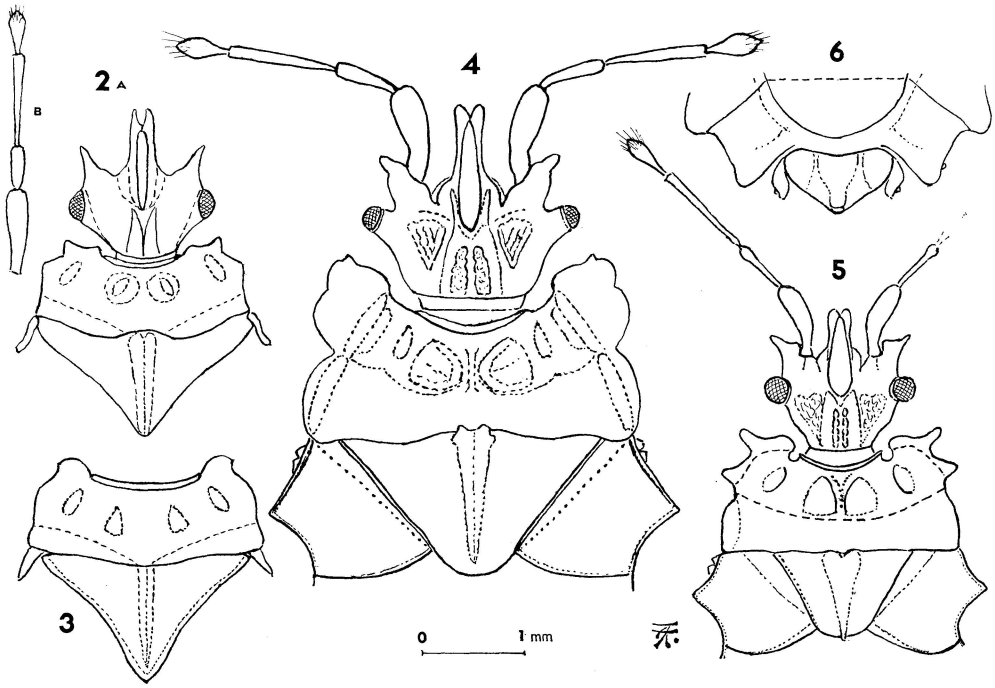


Fig. 2–6. 2, *Artabanus micropterus* n. sp., ♂, A, head, pronotum and scutellum, B, antenna; 3, *A. gazellensis* n. sp., ♀, pronotum and scutellum; 4, *A. brachypterus* n. sp., ♀, head, pronotum, scutellum and hemelytra; 5, *A. fijiensis* n. sp., ♂, head, pronotum, scutellum and hemelytra; 6, same, tip of abdomen from above.

raised posteriorly for reception of a large hypopygium (♂); slightly raised posteriorly and bearing a transverse carina along hind border (♀). Paratergites (♂) dentiform, blunt apically, reaching 3/4 of a cordate hypopygium, the latter with a stout median ridge. Paratergites (♀) subtriangular, blunt apically, produced far beyond short segment IX. Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above. Measurements of abdomen ♂ 86:83, ♀ 108:100, measurements of hypopygium 17.5:28. Stridulation apparatus consisting of a sharp, high carina on sternum IV, flanked by a few longer and shorter rugae; hind tibiae with a long, file-like carina.

Legs. Hind femora with a small, sharp tooth posteriorly; other femora unarmed.

Color: ferrugineous to dark ferrugineous; antennae and legs lighter; scars of abdominal scent-gland openings and round callous spots on abdomen reddish, or yellowish brown.

Total length: ♂ 6.20, ♀ 7.20 mm; width of pronotum ♂ 1.90, ♀ 2.00 mm; width of abdomen ♂ 2.77, ♀ 3.33 mm.

Holotype ♂ (Bishop 8966), NW New Guinea, Nabire, S. Geelvink Bay, 5–50 m, 25.VIII–2.IX.1962, J. Sedlacek coll.

Allotype ♀, and 5 ♂♂ & 6 ♀♀, paratypes, same locality and collector, 2.VII–4.IX.1962 (Bishop).

Artabanus micropterus n. sp. and the following 2 micropterous species are related to *Artabanus bilobiceps* Lethierry, 1888.

Artabanus degeneratus Kormilev, new species

♂. Elongate ovate, partially covered with curled hairs; micropterous. ♀, more ovate, strongly attenuated anteriorly.

Head longer than its width across eyes (♂ 29:26, ♀ 29:27); anterior process long, tapering and incised anteriorly, reaching slightly beyond middle of antennal segment I; antenniferous tubercles dentiform, blunt, more or less diverging; eyes semiglobose, strongly protruding; postocular borders unarmed, strongly converging posteriorly; vertex raised and covered with curled hairs. Antennae thin and long, more than 2 × as long as width of head across eyes (♀ 58:27); relative length of antennal segments I to IV: ♂ 17:9:–:– (2 apical segments missing), ♀ 17:10:21:10. Labium not reaching hind border of labial groove, which is wide and shallow.

Pronotum less than half as long as its maximum width across humeri (♂ 19:42, ♀ 20:45); fore lobe narrower than hind lobe (♂ 40:42, ♀ 40:45). Collar produced anteriorly; anterior borders laterad of collar slightly receding and sinuate; anterolateral angles dentiform and directed laterally; interlobal notch deep, sinuate; lateral borders of hind lobe convex, rounded; hind border slightly convex. Fore disc sloping anteriorly and laterally, with 2(1 + 1) high, rounded tubercles flanking median sulcus, and with 2(1 + 1) lower ridges laterally. Interlobal depression deep and narrow. Hind disc depressed and granulate medially, raised and smooth laterally; with 2(1 + 1) tubercles at humeri.

Scutellum shorter than its basal width (♂ 21:30, ♀ 20:30); highly raised medially and with a stout, tapering and posteriorly sloping, median ridge; disc granulate.

Hemelytra reduced to narrow, curved pads, reaching 1/2 of metanotum.

Abdomen: ♂, with subparallel sides, slightly converging posteriorly; PE-angles of connexiva II to IV not protruding, V to VII produced into triangular teeth, of which V are produced laterally, VI obliquely posteriorly and VII posteriorly. Paratergites dentiform, slender, reaching apical 1/3 of a large, globose hypopygium; the latter shorter than its maximum width (18:21); with a triangular, median ridge, not reaching tip of hypopygium. ♀, ovate; PE-II to IV not protruding; V to VII produced into small, blunt teeth. Paratergites dentiform, reaching tip of a sloping segment IX, placed at a lower level. Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above.

Venter with semiobliterated, longitudinal carinae extending from sternum III to V laterally.

Legs unarmed and hind tibiae without file-like stridulatory surface on upper side.

Color: piceous to black; antennae and legs mostly, and hind lobe of pronotum laterally, yellowish brown.

Total length: ♂ 5.60, ♀ 5.76 mm; width of pronotum ♂ 1.68, ♀ 1.80 mm; width of abdomen ♂ 2.20, ♀ 2.80 mm.

Holotype ♂ (BISHOP 9352), SE New Guinea, Papua, Fly R., Olsobi p., 400–600 m, VIII.1969, J. Sedlacek coll.

Allotype ♀ (BISHOP), SE New Guinea, Papua, Fly R., Kiunga, 35 m, VIII.1969, J. Sedlacek coll.

Artabanus degeneratus n. sp. is rather aberrant (lack of spines on hind femora and file-like stridulatory surface on hind tibiae), but it has the aspect of *Artabanus* and is related to *A. micropterus* n. sp., so it is better placed here.

Artabanus gazellensis Kormilev, new species Fig. 3.

♀. Micropterous. Closely related to *Artabanus micropterus* n. sp. and similar to it. The main difference is in the position of spiracles VI, which are placed close to border, though not visible from above; spiracles II to V are ventral, placed far from border; VII and VIII lateral and visible from above. Antennal segment III is distinctly longer than I (31:26). Labium not reaching hind border of labial groove. Pronotum is also different: anterolateral angles more produced anteriorly, rounded anteriorly and sinuate laterally; lateral borders rounded, not angular. Hemelytra reduced to small, tapering pads. PE-angles of connexiva slightly more protruding. Paratergites subtriangular, rounded apically, produced as far as segment IX, which is incised posteriorly.

Stridulation surface on sternum IV with 1 straight, sharp carina, and mesad of it with 1 long, straight, and a few short, curved, carinae.

Hind femora with a strong, short tooth.

Measurements: head 51:41, relative length of antennal segments I to IV: 26:16.5:31:16; pronotum

23:67; scutellum 31:56; abdomen 102:105.

Color: piceous to black, partially reddish brown (same spots as in *A. micropterus* n. sp.).

Total length: 7.35 mm; width of pronotum 2.40 mm; width of abdomen 3.75 mm.

Holotype ♀ (BISHOP 8967), New Britain, Gazelle Pen., Upper Warangoi, Illugi, 230 m, 12–15. XII.1962, J. Sedlacek coll.

Artabanus umboiensis Kormilev, new species

♂. Micropterous. Also closely related to *Artabanus micropterus* n. sp. and similar to it. The main differences are different position of spiracles, which are progressively nearer to border from II to VI, the latter placed close to border, though not visible from above; VII and VIII lateral and visible from above.

Anterolateral angles of pronotum blunt, lateral borders sinuate anteriorly, and then again on posterior 1/2. Hemelytra reduced to small, crescent-shaped pads. Paratergites short, almost bulbous; median ridge of hypopygium also shorter, not reaching hind border of disc. Legs: hind femora with a strong, blunt tooth. Stridulation surface with 3 long, sharp carinae on sternum IV, and a few shorter carinae mesad of them; on sternum III are 3 carinae corresponding to long ones on sternum IV.

Measurements: head 31:38; relative length of anternnal segments I to IV: 23:14:27:15; pronotum 22:60; scutellum 27:38; abdomen 87:82, and hypopygium 20:27.5.

Color: piceous to black, partially dark ferrugineous (the same spots as on *A. micropterus* n. sp.).

Total length: 6.20 mm; width of pronotum 2.00 mm; width of abdomen 2.73 mm.

Holotype ♂ (BISHOP 8968), Umboi I. (between New Guinea and New Britain), 2 km S Awelkom, 500 m, 27.II.1967, G. A. & S. L. Samuelson coll.

Artabanus brachypterus Kormilev, new species Fig. 4.

♀. Brachypterous. Elongate ovate; head, hind lobe of pronotum, scutellum and hemelytra granulate; disc of abdomen and connexivum deeply punctured. Lateral borders of head and pronotum, PE-angles of connexiva, antennal segment I and legs, partially covered with curled hairs.

Head shorter than its width across eyes (55:59). Anterior process constricted laterally, slightly cleft anteriorly, reaching 3/4 of antennal segment I. Antenniferous tubercles strong, divergent. Eyes stalked. Postocular borders strongly convergent, sinuate anteriorly, and convex posteriorly. Vertex strongly raised, with 2(1 + 1) semifused, granulate ridges, flanked by deep sulci. Infraocular callosities V-shaped and finely rugose. Antennae relatively thin, relative length of antennal segments I to IV: 27:17:30:15. Labium slightly produced behind hind border of labial groove, which is closed posteriorly; labial atrium closed, slit-like.

Pronotum less than half as long as its maximum width (32:88); fore lobe almost as wide as hind lobe (86:88). Collar distinct. Anterolateral angles strongly expanded and reflexed, produced anteriorly and posteriorly, pointed anteriorly and incised laterally. Lateral notch deep, sinuate; interlobal depression deep and wide. Lateral borders of hind lobe convex, rounded; hind border slightly sinuate in middle. Fore disc with a short, median sulcus, flanked by 2(1 + 1) large callosities, and laterad of them by 6(3 + 3) short, curved, longitudinal ridges. Hind disc roughly granulate.

Scutellum shorter than its basal width (36:58); lateral borders straight, carinate; tip widely rounded; disc strongly raised medially, median ridge tapering posteriorly, bifurcate anteriorly, granulate.

Hemelytra covering metanotum; membrane absent, but clavus still discernible. Basolateral borders strongly raised, posterolateral sinuate and carinate, posterior rounded.

Abdomen longer than its maximum width across segment V (148:138). Lateral borders slightly convex, PE-angles slightly protruding. Tergum I reduced to 2(1 + 1) crescent-shaped carinae, separated by the tip of scutellum; tergum II split into 2(1 + 1) triangular plates, flanking central dorsal plate, the latter consisting of terga III to VI and raised medially in the area of dorsal scent-gland scars, and sublaterally; hind border of tergum VI raised and granulate; disc of abdomen and connexivum deeply punctured. Tergum VII raised, particularly at posterior border, and depressed medially. Posterior borders of connexiva II-VI carinate and finely granulate. Paratergites subtriangular, produced as far as segment IX. Spiracles II to VI ventral, placed far from border; VII and VIII lateral and visible from above. Stridulation area with 1 long, sharp carina on sternum IV, and with 1 long, lower, and 2 short, low carinae mesad of the former.

Legs. Hind femora with 1 short tooth, other femora unarmed.

Color: very dark ferrugineous to piceous; hemelytra, labium, coxae, trochanters and claws brown.

Total length: 10.0 mm; width of pronotum 3.13 mm; width of abdomen 4.93 mm.

Holotype ♀ (BISHOP 8969), NE New Guinea, Moife, 2100 m, 15 km NW of Okapa, 11.X.1959, T. C. Maa coll.

Artabanus brachypterus n. sp. is a very distinctive species and not closely related to other known species, but the unarmed postocular borders, and stridulatory apparatus are typical for this genus.

Artabanus fijiensis Kormilev, new species Fig. 5–6.

♂. Brachypterous. Elongate ovate, abdomen with subparallel sides; head, pronotum, scutellum and hemelytra partially covered with dispersed, shiny granulation, which is larger on pronotum posteriorly than on scutellum; other parts of the body roughly punctured. Borders of head, pronotum and abdomen, antennae and legs with very fine, pale pubescense.

Head shorter than width across eyes (38:43). Anterior process with parallel sides, rounded and incised anteriorly, reaching 3/5 of antennal segment I. Antenniferous tubercles stout, with thin, diverging tips. Eyes globose, but not stalked. Postocular borders slightly convex, strongly convergent. Hind border truncate. Vertex raised, with 2(1 + 1) semiobliterated, longitudinal rugae; laterad of raised portion rugose. Antennae thin, relative length of antennal segments I to IV: 20:15:29:14. Labium long, produced over fore border of prosternum, labial groove open posteriorly; labial atrium closed, slit-like.

Pronotum short and wide (25:64), fore lobe as wide as hind lobe. Collar distinctly separated from disc. Anterior borders produced anteriorly far beyond collar, between them and collar 2(1 + 1) deep, round cut outs; anterolateral angles obliquely produced into long, narrow lobes; lateral borders of fore lobe deeply sinuate, posteriorly produced into 2(1 + 1) teeth with blunt tips; lateral notch deep, subangular; interlobal depression also deep; lateral borders of hind lobe subparallel, converging anteriorly; hind border almost straight. Fore lobe with a Y-shaped row of granules medially, flanked by 2(1 + 1) large elevations, and further laterad with 2(1 + 1) low ridges. Along lateral borders extend 2(1 + 1) sulci. Hind disc roughly granulate.

Scutellum shorter than its basal width (25:44). Lateral borders straight, granulate; apex widely rounded; disc raised medially, with a stout, but low, granulate, median ridge, which is incised anteriorly.

Hemelytra covering metanotum; membrane absent, but clavus still discernible. Basolateral borders carinate and sinuate, posterolateral deeply sinuate and carinate, posterior convex, rounded; disc granulate.

Abdomen longer than its maximum width across segment II (103:89); lateral borders from II to VI subparallel, slightly sinuate; strongly converging at VII. PE-angles barely protruding from II to V, forming round lobes at VI, and subangular, directed posteriorly, at VII. Tergum with a pattern similar to that of *A. brachypterus* n. sp., only tergum III much longer than terga IV to VI. Paratergites fusiform, curved, reaching 3/4 of a large, cordate hypopygium, the latter with a stout, median ridge, not reaching tip of disc. Spiracles II ventral, placed far from border; III to VI ventral, placed closer to border; VII and VIII lateral and visible from above. Stridulation area with 1 long, sharp carina on sternum IV, and a few shorter mesad of it.

Legs. Hind femora with a small tooth, other femora unarmed.

Color: ferrugineous; labium, trochanters and tarsi yellowish brown.

Total length: 7.00 mm; width of pronotum 2.32 mm; width of abdomen 3.18 mm.

Holotype ♂ (BISHOP 8970), Fiji, Viti Levu, Lami, II.1951, N. L. H. Krauss coll.

Artabanus fijiensis n. sp. is remotely related to *A. bilobiceps* Lethierry, 1888, but may be separated at once by the abbreviated hemelytra.

Artabanus mcfarlandi Kormilev, 1967

Artabanus mcfarlandi Kormilev, 1967, *Rec. S. Austral. Mus.* **15**(3): 528, f. 16.

DISTRIBUTION: Fiji.

In the collections of the Bishop Museum are 17 specimens from Fiji, Viti Levu.

Artabanus halaszfyi Kormilev, 1955

Artabanus halaszfyi Kormilev, 1955, *Ann. Mag. Nat. Hist.* (12)**8:** 199, f. 8–9.

DISTRIBUTION: Borneo.

In the collections of the Bishop Museum are 4 specimens from Borneo, Viet Nam and Laos.

Note: *Artabanus fukienensis* Kormilev, 1955, *Quart. J. Taiwan Mus.* **8**(3): 182, f. 9–12, probably is synonymous with *A. halaszfyi* Kormilev, 1955, but I leave this question open, as I could not re-examine the first species, and it is omitted in my key. *A. halaszfyi* has priority, as it was published in March, and *A. fukienensis* in September of 1955. *A. fukienensis* is from Fukien, S. China.

Artabanus obscurus Bloete, 1965

Artabanus obscurus Bloete, 1965, *Zool. Verh.* **75:** 17.

DISTRIBUTION: New Guinea.

In the collections of the Bishop Museum is 1 specimen also from New Guinea.

Artabanus montanus Kormilev, new species Fig. 7.

♂. Macropterous. Elongate ovate, with subparallel sides; head, pronotum, scutellum and hypopygium granulate.

Head as long as wide across eyes (45:45). Anterior process long, with parallel sides, deeply cleft anteriorly, reaching to 3/5 of antennal segment I. Antenniferous tubercles strong, dentiform, slightly divaricating. Eyes globose, but not stalked. Postocular borders converging posteriorly, straight. Vertex raised, with 2(1 + 1) semiobliterated ridges, flanked by deep sulci; infraocular callosities elongate, narrowed posteriorly. Antennae slender, relative length of antennal segments I to IV: 25:17:33:15. Labium not reaching hind border of labial groove, which is open posteriorly; labial atrium slit-like.

Pronotum less than half as long as its maximum width (42:88); fore lobe narrower than hind lobe (70:88); collar thin, but distinctly separated from disc; anterior borders laterad of collar with 2(1 + 1) oblique lobes produced far beyond collar and slightly sinuate anteriorly, their interior border rounded, and exterior (antero-lateral angles) produced laterally and upward, forming a tooth; another tooth placed in middle of lateral border of fore lobe. Lateral notch rectangular, intralobal depression deep. Lateral borders of hind lobe rounded, humeri raised; hind border truncate. Fore disc with 2(1 + 1) stout ridges, and laterad of them with 2(1 + 1) smaller and lower; hind disc granulate.

Scutellum carinate on all borders, lateral borders slightly sinuate before apex; disc transversely rugose; median carina tapering toward tip, bilobate anteriorly.

Hemelytra reaching 3/4 of tergum VII, basolateral borders of corium carinate and sinuate exteriorly; apical angle acute, apical border barely sinuate.

Abdomen longer than its maximum width across segment VI (128:105); lateral borders convex, rounded from II to IV, sinuate from V to VI; PE-II to V angles slightly protruding, PE-VI forming a large, rectangular lobe, PE-VII angularly produced posteriorly, reaching 2/3 of paratergites; the latter conical, reaching 2/3 of a large, cordate hypopygium; the latter with a stout median ridge. Spiracles II to V ventral, progressively nearer border, but VI again placed far from border; VII and VIII lateral and visible from above. Stridulation area with 1 long, sharp carina on sternum IV, flanked by 2(1 + 1) lower, long carinae, and 1 or 2 short carinae; a few sinuate, short carinae on sterna III and V.

Legs. Hind femora with a small tooth, other unarmed.

Color: dark ferrugineous, partially brown; connexivum IV with a square, black spot; connexivum VII with an oblique, black strip; connexivum IV posteriorly, V and VI entire, and VII anteriorly, connexiva III to VII on ventral side, and sterna III to VI, yellow.

Total length: 9.25 mm; width of pronotum 3.14 mm; width of abdomen 3.75 mm.

Holotype ♂ (BISHOP 8971), NE New Guinea, Torricelli Mts, Koiniri Vill., 26–29.XI.1958, W. W. Brandt coll.

Paratype 1 ♂, collected with holotype (BISHOP).

Artabanus montanus n. sp. is related to *A. obscurus* Bloete, 1965, also from New Guinea, but may be separated as is indicated in the key.

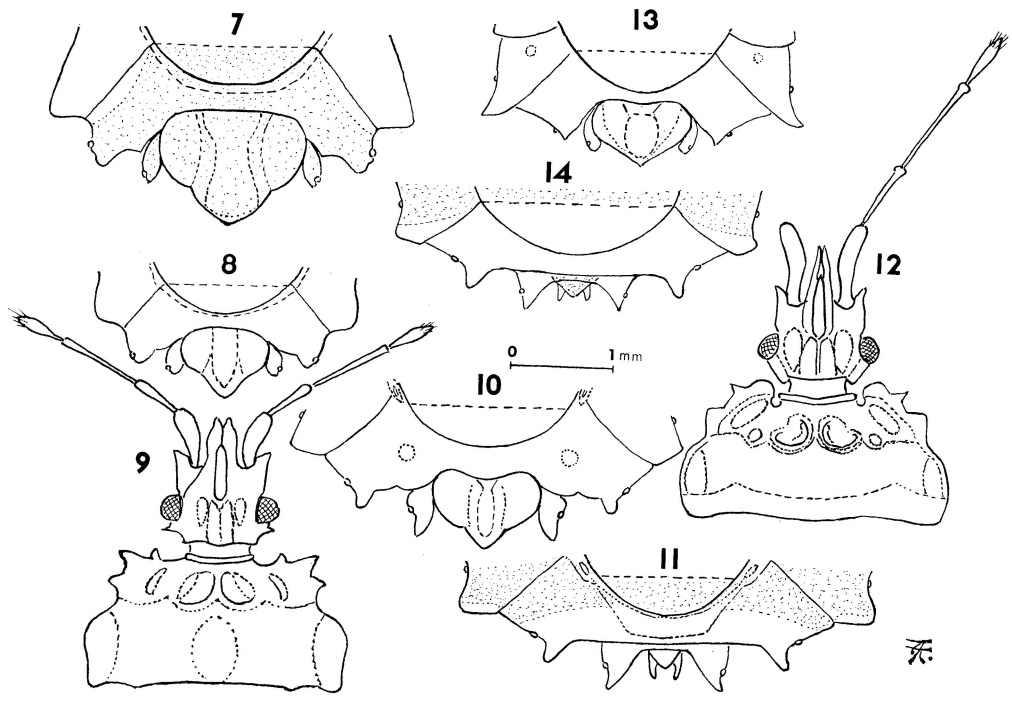


Fig. 7–14. 7, *Artabanus montanus* n. sp., ♂, tip of abdomen from above; 8, *A. robustus* n. sp., ♂, tip of abdomen from above; 9, *A. denticeps* n. sp., ♀, head and pronotum; 10, *A. victor* n. sp., ♂, tip of abdomen from above; 11, same, ♀, tip of abdomen from above; 12, *A. gloriosus* n. sp., ♂, head and pronotum; 13, same, tip of abdomen from above; 14, same, ♀, tip of abdomen from above.

Artabanus robustus Kormilev, new species Fig. 8.

♂. Macropterous. Elongate ovate, partially covered with curled hairs.

Head as long as its width across eyes (35:35); anterior process long, constricted at base, narowing and notched apically, reaching 3/4 of antennal segment I. Antenniferous tubercles dentiform, bent outward, reaching 2/5 of antennal segment I. Eyes globose, protruding. Postocular borders strongly convergent, slightly sinuate anteriorly. Vertex raised and with a W-shaped row of curled hairs; infraocular callosities small, ovate. Antennae thin, relative length of antennal segments I to IV: 19:14:24:12.5. Labium long, produced beyond fore border of prosternum; labial atrium slit-like, labial groove open posteriorly.

Pronotum less than 1/2 as long as its maximum width (32:70); fore lobe narrower than hind lobe (55:70). Collar thin and high; anterior borders obliquely truncate, anterolateral angles produced laterally, forming a tooth; another tooth placed at posterolateral angle of fore lobe. Interlobal notch deep, angular; interlobal depression deep and narrow. Lateral borders of hind lobe strongly rounded, humeri raised; hind border truncate. Fore disc with 2(1 + 1) round ridges, and laterad of them with 2(1 + 1) lower, elongate elevations. Hind disc partially covered with long, curled hairs.

Scutellum shorter than its basal width (30:45); all borders carinate, lateral borders sinuate, tip rounded. Disc transversely rugose; median carina thin, widening and bilobate anteriorly, covered with long, curled hairs.

Hemelytra reaching to middle of tergum VII. Basolateral border of corium carinate, sinuate exteriorly; apical angle rounded, apical border straight.

Abdomen as long as its maximum width across segment III (85:85); lateral borders convex from II to V, sinuate between V and VI, much narrowed at VII; PE-angles II to V slightly protruding, PE-VI forming

a right angle with rounded tip; PE-VII produced posteriorly, blunt apically, reaching 2/3 of paratergites; the latter conical, reaching 2/3 of a cordate hypopygium; hypopygium large, with a stout median ridge, not reaching tip of disc. Posterior borders of connexiva III raised and hairy. Spiracles large, II to VI progressively nearer border; VII and VIII lateral and visible from above. Stridulation area with a few short, sharp carinae on sternum IV.

Legs. Hind femora with a small tooth, other unarmed.

Color: ferrugineous; fore lobe of pronotum, scutellum, connexiva II, IV and V and hypopygium, darker; connexiva III, VI and VII lighter, ochraceous or yellowish.

Total length: 6.60 mm; width of pronotum 2.50 mm; width of abdomen 3.04 mm.

Holotype ♂ (BISHOP 8972), Solomon Is., New Georgia group, Kolombangara I., mt slope from 10–300 m, 5.VII.1959, J. L. Gressitt coll.

Artabanus robustus n. sp. is related to *A. montanus* n. sp., but is smaller and sturdier, the labium is longer, and the spiracles more distant from margin.

Artabanus bilobiceps (Lethierry), 1888

Brachyrhynchus bilobiceps Lethierry, 1888, *Ann. Mus. Civ., Genova* **26:** 464.
Artabanus atkinsoni Bergroth, 1889, *Ann. Mus. Civ., Genova* **27:** 734, t. 12, f. 5.
Artabanus bilobiceps: Bergroth, 1892, *Ann. Mus. Civ., Genova;* **32:** 715.

Artabanus bilobiceps Lethierry has 4 pairs of small, shiny tubercles: at the labial atrium, at the beginning and end of the labial groove, and at the hind border of the metasternum. These tubercles are absent in subspecies *papuasicus* Kormilev, 1967. *Artabanus bilobiceps* s. str. is distributed from Burma (Tenasserim) through Indonesia to the Philippines, and ssp. *papuasicus* from Palau (Koror I.), through New Guinea to New Britain and New Ireland in the Bismark Arch.

In the collections of the Bishop Museum are specimens from Thailand, Borneo (Sarawak) and the Philippines (Palawan, Balaban), and ssp. *papuasicus* from Palau, New Guinea, New Britain and New Ireland.

Artabanus varius (Walker), 1873

Crimia varia Walker, 1873, *Cat. Hem. Het. Brit. Mus.* **7:** 18.
Artabanus varius: Lethierry & Severin, Cat. Gen. Hem. **3:** 39.

In the collections of the Bishop Museum are 2 specimens (♂ & ♀) from Amboina. This species was originally described from Halmahera I. (Gilolo).

Artabanus lativentris Esaki & Matsuda, 1951

Artabanus lativentris Esaki & Matsuda, 1951, *Mushi* **22**(13): 79, t. 8, f. A, C.

DISTRIBUTION: Caroline Is.

In the collections of the Bishop Museum are a couple of specimens also from the Carolines.

Artabanus sinuatus Stål, 1873

Artabanus sinuatus Stål, 1873, *Enum. Hemipt.* **3:** 141.
Crimia doreica Walker, 1873, *Cat. Hem. Het. Brit. Mus.* **7:** 17.
Cinyphus furcatus Signoret, 1880, *Ann. Mus. Civ., Genova* **15:** 541.

DISTRIBUTION: from Ceram and New Guinea to New Hebrides and New Caledonia.

In the collections of the Bishop Museum there are specimens from Ceram, Amboina, New Guinea, New Britain, Solomon Is., and New Hebrides.

Artabanus geniculatus Stål, 1870

Artabanus geniculatus Stål, 1870, *Oefv. Vet.-Ak. Foerh.* **7**(11): 673.

DISTRIBUTION: Philippines.

In the collections of the Bishop Museum is 1 specimen also from the Philippines (Camarines).

Artabanus denticeps Kormilev, new species Fig. 9.

♀. Macropterous. Ovate, roughly granulate; head with small postocular spines. Pubescense of the body extremely short, inconspicuous.

Head longer than its width across eyes. Anterior process reaching 4/5 of antennal segment I, forked anteriorly. Antenniferous tubercles slightly divaricating; postocular borders with a small tooth just behind eyes, by far not reaching outer border of the latter. Vertex raised, granulate. Antennae thin. Labium reaching hind border of labial groove, which is closed posteriorly.

Anterolateral angles of pronotum tridentate, the middle tooth more robust and longer; lateral notch sinuate, lateral borders of hind lobe convex. Fore disc with 4(2 + 2) low ridges; hind disc granulate.

Lateral borders of scutellum carinate, straight, sinuate before apex; the latter rounded. Disc with median ridge forked anteriorly, and tapering posteriorly; laterad of ridge granulate.

Hemelytra reaching beyond 1/2 of tergum VII; basolateral border of corium reflexed, convex at base, then straight; apical angle blunt, apical border twice sinuate, interior sinus deeper.

Abdomen ovate; connexiva II and III fused together, other separated; PE-angles II and III not protruding, IV to VI protruding, VII forming small, rounded, diverging lobes. Paratergites dentiform, almost reaching tip of a tricuspidate segment IX. Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above.

Legs. Hind femora with a strong tooth inferiorly.

Measurements: head 30.5:29.5, relative length of antennal segments I to IV: 15:12.5:20:13; pronotum 33:65, ratio width of fore lobe/width of hind lobe 51:65; scutellum 25:35; abdomen 88:82 across segment IV.

Color: black; large, round spot on connexivum III, the whole connexiva V and VI, and most of VII, labium and tarsi are orange-yellow; antennal segments II and III, tibiae and tarsi ferrugineous.

Total length: 7.00 mm; width of pronotum 2.60 mm; width of abdomen 3.28 mm.

Holotype ♀ (BISHOP 8973), Viet Nam, Fyan, 900–1000 m, 11.VII–9.VIII.1961, N. R. Spencer coll.

Artabanus sexdentatus Kormilev, new species

♀. Macropterous. Closely related and similar to *Artabanus denticeps* n. sp., but covered with conspicuous, dense, curled, yellow hairs on all prominent parts of the body; anterior process not cleft, postocular borders without tooth, labium a little longer, touching fore border of prosternum, labial groove open posteriorly.

Measurements: head 35:32, relative length of antennal segments I to IV: 15:10:19:11; pronotum 30:69, ratio width of fore lobe/width of hind lobe 50:69; scutellum 26:40; abdomen 78:83 across segment IV.

Color: ferrugineous, partially darker, almost piceous; membrane black.

Total length: 6.64 mm; width of pronotum 2.76 mm; width of abdomen 3.32 mm.

Holotype ♀ (BISHOP 8974), Solomon Is., Bougainville, Kukugai Vill., 150 m, XII.1960, W. W. Brandt coll.

Artabanus victor Kormilev, new species Fig. 10–11.

♂. Macropterous. Elongate triangular, partially granulate and covered with extremely short, curled hairs.

Head longer than its width across eyes; anterior process deeply cleft anteriorly, genae contiguous in front of clypeus, reaching 4/5 of antennal segment I; antenniferous tubercles acute, divaricating; postocular borders converging, barely sinuate; vertex raised, with a double row of pilosity. Antennae long and thin. Labium reaching hind border of labial groove, which is closed posteriorly.

Pronotum with anterolateral angles expanded, forming tripronged, oblique lobes: the 1st tooth directed inward and rounded, the middle one acute, directed obliquely forward, the 3rd, also acute, directed sideways. Interlobal notch deep, rounded; lateral borders of hind lobe convex, rounded. Fore disc with 2(1 + 1) large, round callosities, and laterad of them with 2(1 + 1) small, oblique ridges. Hind disc granulate.

Scutellum with lateral borders carinate, sinuate before apex; latter rounded; disc transversely rugose; median ridge low, forked anteriorly.

Hemelytra reaching 3/4 of tergum VII in both sexes; basolateral border of corium carinate, sinuate exteriorly; apical angle rectangular, apical border slightly sinuate.

Abdomen with wide and flat connexivum; lateral borders convex from II to V (♂), or to fore half of VI (♀), then abruptly dilated, forming an angular lobe (♂), or rounded lobe (♀); PE-II angles to V slightly protruding, VI rectangular, VII forming small, rounded lobes. Paratergities long, acute, almost reaching tip of a cordate hypopygium (♂), or produced beyond deeply cut out segment IX (♀). Spiracles II to V ventral, placed far from border; VI lateral (♂), or sublateral (♀), visible from above; VII and VIII lateral.

Legs. Hind femora with small tooth.

Measurements: head ♂ 41:33, ♀ 45:37, relative length of antennal segments I to IV: ♂ 23:17:–:– (2 apical missing), ♀ 22.5:18:33:16; pronotum ♂ 35:79, ♀ 37:86; fore lobe narrower than hind lobe ♂ 67:79, ♀ 75:86; scutellum ♂ 35:50, ♀ 39:54; abdomen ♂ 106:110 across segment VI, ♀ 118:124 across segment IV; hypopygium 17.5:28.

Color: dark ferrugineous; (♂) expanded anterolateral borders of pronotum, PE-angles II to VI, triangular spots on connexiva III to V internally, the whole connexivum VII, and paratergites, yellow; (♀) the same, only half of connexivum VII yellow; femora and tibiae yellow with brown rings, tarsi yellow.

Total length: ♂ 7.68, ♀ 8.29 mm; width of pronotum ♂ 2.82, ♀ 3.07; width of abdomen ♂ 3.93, ♀ 4.43 mm.

Holotype ♂ (Bishop 8975), Solomon Is., Guadalcanal, Tenaru creek, 10–50 m, 7.V.1964, R. Stratman coll.

Allotype ♀ (Bishop), Solomon Is., Guadalcanal, Beticama R., IX.1960, W. W. Brandt coll.

Artabanus victor n. sp. and the following 3 species form a distinct group, all 4 having a subtriangular body and spiracle VI either lateral, or sublateral, and visible from above.

Artabanus gloriosus Kormilev, new species Fig. 12–14.

♂. Macropterous. Closely related to *Artabanus victor* n. sp., but slightly smaller and narrower; head relatively shorter, anterior process reaching to about 3/4 of antennal segment I; expanded anterolateral angles of pronotum with short teeth in both sexes. Abdomen (♂) with PE-IV and V more protruding than PE-II and III, PE-VI and VII acute, and paratergites curved inward, reaching 3/4 of cordate hypopygium. Abdomen (♀) with paratergites relatively shorter and blunt apically, valves of segment IX also shorter. Position of spiracles, stridulation area, and color similar to *A. victor* n. sp.

Measurements: head ♂ 36:33, ♀ 40:35; relative length of antennal segments I to IV: ♂ 22:18:30:18, ♀ 22.5:18:29:16; pronotum ♂ 35:76, ♀ 35:80; ratio width of fore lobe/width of hind lobe ♂ 63:76, ♀ 65:80; scutellum ♂ 30:45, ♀ 35:50; abdomen ♂ 86:95 across segment IV, ♀ 95:110 also across segment IV; hypopygium 16:28.

Total length: ♂ 7.18, ♀ 7.54 mm; width of pronotum ♂ 2.71, ♀ 2.85 mm; width of abdomen ♂ 3.39, ♀ 3.93 mm.

Holotype ♂ (Bishop 8976), Solomon Is., Malaita, 6 km N of Auki, 60 m, 3.VI.1964, J. & M. Sedlacek coll.

Allotype ♀ (Bishop), Solomon Is., Guadalcanal, Tumbalia, 35 km W of Honiara, 30 m, 20. V.1964, J. & M. Sedlacek coll.

Artabanus superbus Kormilev, new species Fig. 15.

♀. Macropterous; also closely related to *A. victor* n. sp., but larger, anterior process of head shorter, reaching slightly over 2/3 of antennal segment I; antenniferous tubercles less acute, antennae relatively shorter; expanded anterolateral angles of pronotum with more stout teeth: the 1st one more produced mesad and rounded, the 2nd directed more forward, and the 3rd distinctly wider at base. Abdomen similar, but PE-VI relatively larger, PE-VII shorter and wider at base; paratergites produced as far as segment IX. Spiracles II to V ventral, placed far from border; VI ventral, placed close to border, but not visible from above; VII dorsolateral, VIII lateral. Stridulation areas similar; metathoracic scent-gland openings longer. Color more uniformly ferrugineous, without yellow trimmings.

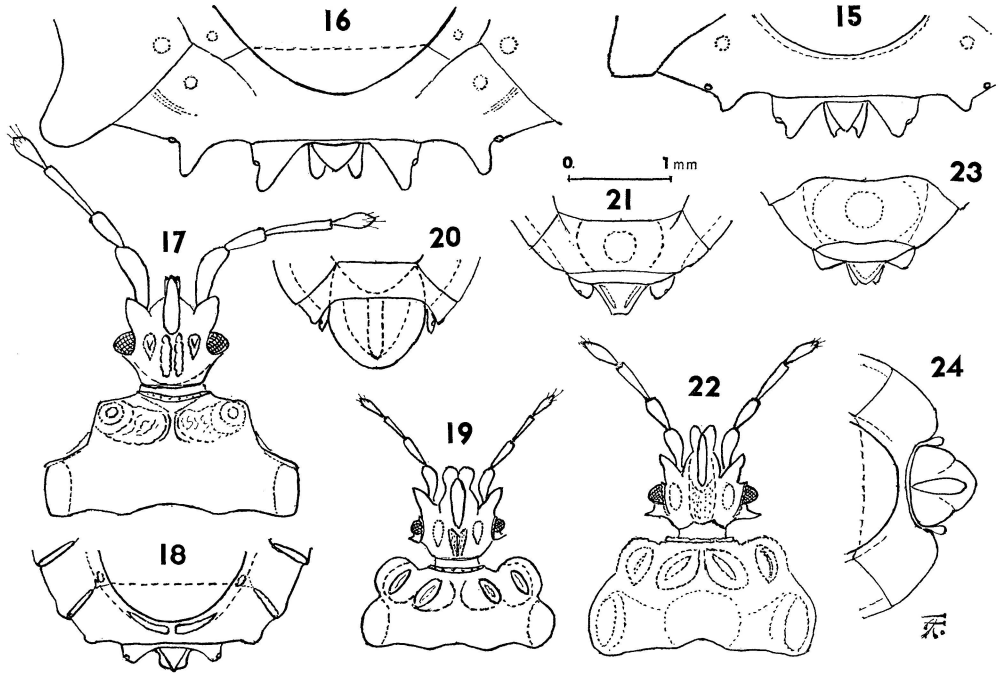


Fig. 15–24. 15, *Artabanus superbus* n. sp., ♀, tip of abdomen from above; 16, *A. magnificus* n. sp., ♀, tip of abdomen from above; 17, *Scironocoris obscurus* n. sp., ♀, head and pronotum; 18, same, tip of abdomen from above; 19, *Mezira roberti* n. sp., ♂, head and pronotum; 20, same, tip of abdomen from above; 21, same, ♀, tip of abdomen from above; 22, *M. lateralis* (Walker), 1873, ♀, head and pronotum; 23, same, tip of abdomen from above; 24, *M.* (*Zemira*) *armigera* n. sp., ♂, tip of abdomen from above.

Measurements: head 49:40, relative length of antennal segments I to IV: 27:21:36:19; pronotum 43:100; ratio width of fore lobe/width of hind lobe 85:100; scutellum 45:67; abdomen 126:150, across segment IV.

Total length: 9.46 mm; width of pronotum 3.57 mm; width of abdomen 5.36 mm.

Holotype ♀ (BISHOP 8977), Solomon Is., Kolombangara I., Pepele, 30 m, 7.II.1964, P. Shanahan coll.

Artabanus magnificus Kormilev, new species Fig. 16.

♀. Macropterous. Also related to *A. victor* n. sp., but is the largest of all 4 species in this group. It differs from *A. victor* n. sp. by anterior process of head more robust on basal 1/2, and more tapering on apical 1/2, reaching to 4/5 of antennal segment I; antenniferous tubercles more pointed and strongly bent outward; antennae relatively shorter; expanded anterolateral angles of pronotum with stronger teeth, of which the 2nd is directed obliquely anteriorly. PE-VI angles relatively larger and longer, with more rounded tips; paratergites more directed posteriorly, reaching beyond tip of segment IX. Spiracles II to V ventral, placed more mesad; VI ventral, placed close to margin, but not visible from above; VII and VIII lateral. Stridulation areas as in *A. victor* n. sp. Color also as in *A. victor*, but without yellow trimmings.

Measurements: head 58:45; relative length of antennal segments I to IV: 32:25:40:22.5; pronotum 50:115; ratio width of fore lobe/width of hind lobe 105:115; scutellum 52:72; abdomen 146:175, across segment IV.

Total length: 11.0 mm; width of pronotum 4.11 mm; width of abdomen 6.25 mm.

Holotype ♀ (BISHOP 8978), Solomon Is., Santa Isabel, Molao, 29.VI.1960, C. W. O'Brien coll.

Genus **Dimorphacantha** Usinger & Matsuda, 1959

Dimorphacantha Usinger & Matsuda had 2 species to which is added *Artabanus luchti* Kiritshenko, 1959, hence we have:

Dimorphacantha luchti (Kiritshenko), new combination

Usinger & Matsuda (1959: 256) mentioned that they had seen a few more species belonging to this genus, 1 of them brachypterous, but they are not described yet.

The ♂♂ of the type species, *D. distincta* Usinger & Matsuda, have curious metapleural spines, unique among Aradidae, which are missing in the ♀♀, and in some smaller, undescribed species. Whether *D. luchti* has such spines remains to be seen, as the ♂♂ are still unknown.

DISTRIBUTION: Burma to the Philippines.

Genus **Sironócoris** Kormilev, 1957

The type species, *S. armigerus* Kormilev, 1957, is brachypterous; 2 new species described in this paper are macropterous. All 3 species are from New Guinea, and may be separated by the following key:

KEY TO SPECIES OF *Sironocoris* KORMILEV

1(2). Brachypterous. (New Guinea).....**armigerus** Kormilev, 1957
Macropterous 2

2(1). Head as long as width across eyes; anterolateral angles of pronotum forming an obtuse angle; longitudinal carinae on connexiva obliterated, PE-VII angles barely produced. (New Guinea) .....**obscurus***
Head distinctly shorter than its width across eyes; anterolateral angles of pronotum rectangular with blunt tips; longitudinal carinae on connexivum discernible, PE-VII angles produced into small, rounded lobes. (New Guinea).....**papuasicus***

Scironocoris obscurus Kormilev, new species Fig. 17–18.

♀. Macropterous. Elongate ovate, partially granulate.

Head as long as its width across eyes (32:32); anterior process short, with parallel sides, reaching 2/5 of antennal segment I; antenniferous tubercles blunt, divaricating. Eyes semiglobose, protruding. Postocular borders unarmed, strongly convergent; vertex with 2(1 + 1) longitudinal carinae. Antennae strong, relative length of antennal segments I to IV: 18:11:18:12.5; labial atrium closed, slit-like.

Pronotum half as long as its maximum width (35:70); collar thin, anterolateral angles neither produced forward, nor laterally, forming an obtuse angle; lateral notch angularly sinuate; lateral borders of hind lobe subparallel; hind border slightly sinuate medially. Fore disc with a deep median depression, flanked by 2(1 + 1) rugose areas, and further laterad with 2(1 + 1) high, rounded ridges. Hind disc granulate.

Scutellum triangular, lateral borders straight and carinate, tip rounded; disc with a narrow median ridge, granulate. Ratio length/basal width 27:40.

Hemelytra reaching 2/3 of tergum VII; basolateral border of corium carinate; apical angle pointed, apical border straight.

Abdomen longer than its maximum width (83:76); connexivum with transverse ridges at hind border of segments III to VI, longitudinal ridges obsolete (they are clearly developed in the brachypterous species, *S. armigerus* Kormilev, 1957, less so in the next species, *S. papuasicus* n. sp.). Paratergites blunt, reaching 2/3 of segment IX. Spiracles II to VII ventral and not visible from above, VIII lateral and visible from above.

PE-VII angles barely protruding, rounded.

Legs. Each femur with a strong spine.

Color: black; antennae, labium and legs ferrugineous to piceous.

Total length: 6.43 mm; width of pronotum 2.50 mm; width of abdomen 2.71 mm.

Holotype ♀ (BISHOP 8979), NE New Guinea, Karimui, 1080 m, 13.VII.1963, J. Sedlacek.

Scironocoris papuasicus Kormilev, new species

♀. Macropterous. Similar to *S. obscurus* n. sp., but head shorter than its width across eyes; antennae also relatively shorter; vertex less raised. Anterolateral angles of pronotum rectangular, with blunt tip; median depression of fore lobe of pronotum narrower and deeper; inner ridges of fore lobe obliterated, outer ridges more rounded and higher than in *S. obscurus* n. sp. Scutellum and hemelytra similar to those of *S. obscurus* n. sp. Longitudinal ridges on connexiva thin, but discernible; PE-VII angles produced into small, rounded lobes. Paratergites conical, with blunt tips, reaching 2/3 of segment IX. Position of spiracles as in *S. obscurus* n. sp.

Measurements: head 27:31; relative length of antennal segments I to IV: 16:10:16:12; pronotum 35:65; scutellum 30:40; abdomen 75:72.

Color: ferrugineous; membrane black, brown at base; labium and tarsi yellowish brown.

Total length: 5.90 mm; width of pronotum 2.32 mm; width of abdomen 2.54 mm.

Holotype ♀ (BISHOP 8980), NE New Guinea, Papua, Lamington Distr., Northern Division, VII.1927, C. T. McNamara coll. This specimen was received in exchange from the Australian Museum, Sydney.

Genus **Phloeobia** Montrouzier, 1864

This genus, with a single species, the 1st of apterous aradids described as such, is limited to New Caledonia, where it seems it is not rare.

Phloeobia sayi Montrouzier, 1864

Phloeobia sayi Montrouzier, 1864, *Ann. Soc. Linn., Lyon* ser. 2, **11:** 236.

In the collections of the Bishop Museum there are 19 adults and 25 nymphs of *Phloeobia sayi* Montrouzier from various localities on the island.

Genus **Mezira** Amyot and Serville, 1843

The genus *Mezira* A. S. is the largest and the most common genus of the Mezirinae. Distributed around the world, with the exception of colder areas, it is very heterogeneous. Usinger & Matsuda (1959: 378) have removed a few genera from *Mezira* A. S., e.g., *Oroessa*, *Daulocoris*, *Arictus* and *Zeugocoris*, but further splitting is still necessary. A revision of the genus *Mezira* A. S. should be done on a world-wide basis, but it greatly exceeds the scope of this paper, so I am limiting myself to separating only the so-called "membranacea group" of species, which is mainly Oriental and in the Pacific, and is characterized by deeply sinuate hind border of pronotum, large claws without arolia, and by the suture between terga II and III bent backward in the middle. This group contains the majority of Oriental and southern Pacific species of this genus, formerly assembled in the genus *Brachyrhynchus* Laporte, 1832, based on *Brachyrhynchus orientalis* Laporte, 1832. Later, *Mezira* A. S., 1843, was synonymized with *Brachyrhynchus* Laporte, 1832, but it was found that the name *Brachyrhynchus* was preoccupied in Coleoptera and Aves. For the "membranacea group" of species I propose to create a new subgenus, at least until the world-wide revision of the genus is made, which alone can determine if this group merits subgeneric or generic rank, and name it *Zemira* n. subgen. (*Zemira* is an anagram of *Mezira*). To *Zemira* besides the "membranacea group" probably also belong some African species, particularly from the former genus *Dusius* Bergroth, 1894, but that should be determined by a separate study.

Subgenus *Mezira* A. S., sensu strictu

Type species: *Mezira granulata* A. S., 1843 (=*Brachyrhynchus abdominalis* Stål, 1873).

This subgenus, which includes all species outside *Zemira*, is still heterogeneous, but it may be characterized mainly by the straight, or slightly sinuate hind margin of the pronotum, by tarsi mostly with arolia, and by suture between terga II and III bent forward in the middle, like an inverted "V". Most of the species have closed, slit-like labial atrium, but some have it open. As we will see later in the genus *Daulocoris* Usinger & Matsuda, 1959, the open or closed atrium is not always a generic character. Among species of *Mezira* s. str., some are brachypterous.

Mezira (**Mezira**) **roberti** Kormilev, new species Fig. 19–21.

♂. Brachypterous. Ovate, densely granulate.

Head shorter than width across eyes (♂ 25:27.5, ♀ 27.5:30). Anterior process robust, constricted at base, expanded and rounded apically and incised in middle, reaching beyond 3/4 of antennal segment I. Antenniferous tubercles strong, divaricating. Eyes small, semiglobose, protruding. Postocular tubercles small, acute, reaching outer border of eyes; infraocular carinae high, crenulate. Antennae thin, relative length of antennal segments I to IV: ♂ 10:9.5:9.5:9, ♀ 11:10:–:– (2 apical segments missing). Labium reaching fore border of prosternum, labial atrium closed. Vertex with 2 rows of granules.

Pronotum less than 1/2 as long as its maximum width (♂ 24:54, ♀ 25:57), fore lobe narrower than hind lobe (♂ 49:54, ♀ 51:57). Collar thin, granulate; anterolateral angles expanded, rounded and produced anteriorly beyond collar and laterally; lateral notch deep, angular; lateral borders of hind lobe rounded; hind border trisinuate. Fore disc with 4(2 + 2) high, granulate ridges; hind disc granulate.

Scutellum shorter than its basal width (♂ 22.5:30, ♀ 25:32); lateral borders sinuate before tip, carinate; tip rounded; median ridge wide, spear-shaped; disc granulate and raised at basolateral angles.

Hemelytra abbreviated, reaching middle of tergum II; basolateral borders of corium carinate, apical border rounded, disc granulate; clavus not discernible, membrane absent.

Abdomen with parallel sides (♂), or convex (♀), longer than its maximum width across segment V (♂), or IV (♀), in the latter it is as long as wide (♂ 65:61, ♀ 75:75). Midlateral glabrous areas poorly separated from the disc, the latter raised medially and deeply punctured; connexivum relatively narrow, PE-angles not protruding, PE-VII angular (♂), or obtuse (♀). Paratergites (♂) very small, reaching 1/3 of a large, obovate hypopygium, the latter shorter than wide (19:27). Paratergites (♀) small, convergent, reaching to middle of a small segment IX. In the ♂, sternum VII is as long in the middle as sterna IV to VI together. Spiracles II to VII ventral, placed far from border, VIII lateral and visible from above.

Legs. Unarmed, trochanters free, arolia present.

Color: testaceous, partially ferrugineous; tarsi and labium yellow.

Total length: ♂ 4.57, ♀ 5.17 mm; width of pronotum ♂ 1.80, ♀ 1.90 mm; width of abdomen ♂ 2.03, ♀ 2.50 mm.

Holotype ♂ (Bishop 8981), Ceram, Piroe, II.1909, F. Muir.

Allotopotype ♀ (Bishop), collected with holotype, bears a label: "Mezira brachyptera Usinger, Det. R. L. Usinger, '48."

The description of this species was never published, and the *nomen nudum* would be preoccupied by *Mezira brachyptera* Kormilev, 1964, from Jamaica. I dedicate this species to the memory of the late Dr Robert L. Usinger, who first identified it.

Mezira (**Mezira**) **loriae** (Bergroth), 1894

Brachyrhynchus loriae Bergroth, 1894, *Ann. Mus. Civ., Genova* **34:** 111.

Mezira loriae: Usinger & Matsuda, 1959, Class. Aradidae: 380.

As I had an opportunity to examine the type, I am giving a short redescription.

♀. Macropterous. Small, elongate, almost parallel sides.

Head shorter than its width across eyes (17:18.5); anterior process slender, constricted laterally and slightly

notched at tip, reaching 3/5 of antennal segment I. Antenniferous tubercles small, acute, divaricating. Eyes moderately large. Postocular tubercles very small, obtuse, by far not reaching outer border of eyes. Infraocular carinae low, crenulate; vertex with rough, disperse granules. Antennae short, granulate; relative length of antennal segments I to IV: 8:6:8:9. Labium short, not reaching base of head.

Pronotum shorter than its maximum width (20:39); anterolateral angles rounded and produced anteriorly; lateral borders subparallel, converging anteriorly, hind border widely sinuate. Fore disc with 4(2 + 2) granulate ridges, more or less equally developed; interlobal depression deep, hind disc roughly granulate.

Scutellum shorter than its basal width (17:22); lateral borders carinate, slightly sinuate before tip; the latter slightly notched; median carina thin, disc laterad of it transversely rugose.

Hemelytra reaching to hind border of tergum VI; apical angle of corium acute, apical border sinuate interiorly.

Abdomen long and narrow (75:44), with almost parallel sides. Paratergites rounded, reaching middle of tricuspidate segment IX. Spiracles II to VI ventral, placed far from border; VII ventral placed nearer to border, but not visible from above; VIII lateral.

Color: testaceous; labium and tarsi ochraceous; membrane brown, whitish at base.

Total length: 4.6 mm; width of pronotum 1.3 mm; width of abdomen 1.45 mm.

Type of Bergroth ♀, New Guinea, Bujakori, VIII.1890, L. Loria (Museum Civico di Storia Naturali, Genova).

Mezira (**Mezira**) **lateralis** (Walker), 1873, new combination Fig. 22–23.

Crimia lateralis Walker, 1873, *Cat. Hem. Het. Brit. Mus.* **7:** 14.

Neuroctenus lateralis: Distant, 1902, *Ann. Mag. Nat. Hist.* ser. 7, **9:** 361.

♀. Macropterous. Elongate ovate, finely granulate.

Head shorter than its width across eyes (24:27); anterior process long, sides parallel, slightly incised apically, reaching tip of antennal segment I; antenniferous tubercles acute, divaricating. Eyes semiglobose. Postocular tubercles acute, slightly produced beyond outer borders of eyes; infraocular carinae high, crenulate; vertex granulate. Antennae moderately stout; relative length of antennal segments I to IV: 10:9:11:10. Labium reaching base of head, labial atrium closed.

Pronotum less than 1/2 as long as its maximum width (25:56); fore lobe narrower than hind lobe (42:56). Anterolateral angles rounded, neither produced anteriorly, nor laterally; lateral notch forming an obtuse angle; lateral borders of hind lobe slightly convex, hind border slightly sinuate medially. Fore disc with 4(2 + 2) ridges, hind disc granulate.

Scutellum with lateral borders carinate, sinuate before tip; the latter rounded; median ridge wide, T-shaped.

Hemelytra reaching hind border of tergum VI; basolateral borders of corium granulate and slightly convergent; apical border convex exteriorly, sinuate interiorly; tip rounded.

Abdomen ovate, much longer than wide (90:63); PE-angles barely protruding, connexivum weakly festooned, PE-VII rounded. Paratergites rounded, reaching 2/5 of segment IX; the latter tricuspidate. Spiracles II to VIII ventral, placed far from border.

Color: grayish brown; base of antennal segments I to III, anterolateral borders of pronotum, discs of connexiva, borders of paratergites testaceous to ferrugineous; venter ferrugineous; labium, coxae, trochanters yellowish brown; base of tibiae and hind borders of connexiva yellow.

Total length: 6.10 mm; width of pronotum 2.00 mm; width of abdomen 2.25 mm.

Cotype ♀ (British Museum, N. H.), Ceylon, 52–62.

Mezira (**Mezira**) **piligera** Kormilev, new species Fig. 26–27.

♀. Macropterous. Elongate ovate, roughly granulate and covered with long erect setae.

Head slightly shorter than its width across eyes (45:47); anterior process stout, with parallel sides, slightly incised anteriorly, reaching 1/2 of antennal segment I; antenniferous tubercles stout and blunt. Eyes semiglobose, protruding. Postocular tubercles small, by far not reaching outer borders of eyes. Vertex raised, transversely rugose and granulate. Infraocular carinae low, crenulate. Antennae long and thin, relative length

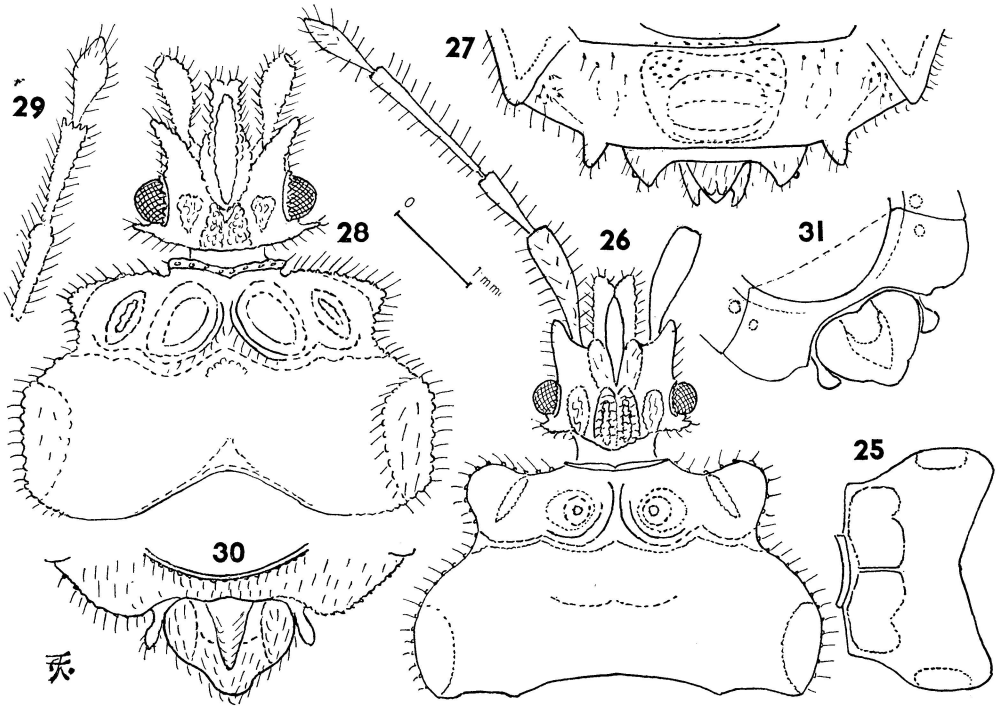


Fig. 25–31. 25, *Mezira armigera* n. sp., ♂, pronotum; 26, *M. piligera* n. sp., ♀, head and pronotum; 27, same, tip of abdomen from above; 28, *M. hispida* n. sp., ♂, head and pronotum; 29, same, antenna; 30, same, tip of abdomen from above; 31, *M. quadridentata* n. sp., ♂, tip of abdomen from above.

of antennal segments I to IV: 35:20:42:25. Labium not reaching hind border of labial groove; labial atrium slit-like.

Pronotum more than 1/2 as long as maximum width (62:113); fore lobe narrower than hind lobe (85:113); collar thin, anterior borders laterad of collar sinuate; anterolateral angles expanded, and rounded, but slightly not reaching fore border of collar; lateral notch deep, angular; lateral borders of hind lobe convex. Fore disc with 2(1 + 1) high, round ridges, and laterad of them with 2(1 + 1) smaller, longitudinal ridges; interiobal depression deep; hind disc granulate. Hind border shallowly sinuate in middle and laterally.

Scutellum shorter than its basal width (48:63); lateral borders carinate and slightly sinuate, tip angularly rounded; median ridge cross shaped, tapering toward tip.

Hemelytra reaching hind border of tergum VI; basolateral borders of corium carinate and crenulate; apical angle acute, apical border convex outside, sinuate inside; disc sparsely granulate.

Abdomen ovate, almost as long as its maximum width across segment IV (157:158). Connexivum wide, sutures between segments with short, stout; transverse ridges, not reaching midlateral glabrous areas, which are wide. Exterior borders of connexiva slightly convex on connexiva II to IV, straight on V, slightly sinuate on VI, and straight on VII; PE-angles barely protruding on II to VI, forming small, rounded lobes on VII. Tergum VII strongly raised, then depressed in middle. Paratergites triangular, reaching middle of tricuspidate segment IX. Spiracles II to VII ventral, placed far from border, VIII lateral and visible from above.

Legs. Unarmed, but roughly granulate; claws with long, thin arolia.

Color: black; round callous spots on connexiva, labium, tarsi, coxae and trochanters, dark ferrugineous; membrane black, whitish at base.

Total length: 12.5 mm; width of pronotum 3.8 mm; width of abdomen 5.3 mm.

Holotype ♀ (BISHOP 8982), Viet Nam, Dillinh (Djiring), 1200 m, 22–28.IV.1960, L. W. Quate coll.

Mezira piligera n. sp. resembles *M. pilifera* Kormilev, 1967 from Laos, but it is much larger, the outer ridges of pronotum are smaller.

Mezira (Mezira) scabrosa Scott

Mezira scabrosa Scott, 1874, *Ann. Mag. Nat. Hist.* ser. 4, **14:** 444.

DISTRIBUTION: Japan.

There is a specimen in the collections of the Bishop Museum which I believe is *M. scabrosa* Scott, also from Japan, Chuzenji.

Mezira (Mezira) similis Hsiao

Mezira similis Hsiao, 1964, *Acta Ent. Sinica* **13:** 597 (605), fig. 25.

DISTRIBUTION: S. China (Yunnan).

There are a few specimens of *M. similis* Hsiao in the collections of the Bishop Museum from Viet Nam (South), Laos and Thailand, which enlarges considerably its distribution.

Mezira (Mezira) yunnana Hsiao

Mezira yunnana Hsiao, 1964, *Acta Ent. Sinica* **13:** 598 (605), fig. 26–27.

DISTRIBUTION: S. China (Yunnan).

In the Bishop Museum collections there are numerous specimens from Laos.

Subgenus **Zemira** Kormilev, new subgenus

Type species: *Aradus membranaceus* F., 1803 (=*Mezira membranacea* (F.)).

Zemira n. sg. differs from *Mezira* s. str. by deeply sinuate hind border of pronotum, and by the large claws without arolia.

The Oriental, Australian and Southern Pacific species of *Zemira* may be separated by the following key:

KEY TO ORIENTAL, AUSTRALIAN AND S. PACIFIC SPECIES OF *Zemira* n. sg.

1 (2). All femora with a double row of teeth on apical 1/2 inferiorly, body with stiff, erect bristles.....2
At most middle and hind femora with 1 tooth.....3

2 (1). Anterolateral angles of pronotum produced laterally as small, angular or rounded lobes. (Borneo) .....**hispida***
Anterolateral angles of pronotum rounded, neither produced anteriorly, nor laterally. (Malaya) .....**kerzhneri***

3 (1). Middle and hind femora with 1 tooth.....4
At most hind femora with 1 tooth.....5

4 (3). Head slightly shorter than its width across eyes (28:31); antennal segment II as long as, or slightly shorter than III (15:15, or 15:17); PE-angles VII (♂) regularly rounded posteriorly, not sinuate. (Philippines).....**armigera***
Head distinctly shorter than its width across eyes (28:35); antennal segment II distinctly shorter than III (15:18.5); PE-VII angles (♂) rounded and slightly sinuate interiorly. (Sumatra) .....**quadridentata***

5 (3). Hind femora with a tooth.....6
All femora unarmed.....7

*Described as new.

6 (5). Smaller species (♀ 7.2 mm); postocular tubercles produced beyond outer border of eyes. (Philippines).....**discrepans** (Bergroth), 1894
Larger species (♂ 7.8 mm); postocular tubercles not reaching outer borders of eyes. (Borneo).....**spinipes** Kormilev, 1965
7 (5). Body covered with stiff, erect bristles.....8
Body at most covered with short, fine, curled hairs or tomentum.....9
8 (7). Smaller species (♀ less than 11.5 mm); anterior process of head longer, produced to 3/5 of antennal segment I; antennae shorter, 2.1 × as long as head width across eyes. (Laos).....**pilifera** Kormilev, 1967
Larger species (♀ 14 mm or more); anterior process of head shorter, not reaching middle of antennal segment I; antennae longer, 3 × as long as head width across eyes. (Sumatra) .....**sumatrensis***
9 (7). Postocular tubercles absent, postocular borders straight, converging posteriorly; if small postocular tubercles present, then postocular borders behind them straight and converging. PE-VII angles (♂) recurved.....10
Postocular tubercles always present, though they may be very small and adhering to eyes.....11
10 (9). Postocular tubercles absent; antennae longer, 2.75 as long as head width across eyes; anterior borders of pronotum laterad of collar receding; granulation of body very rough and conspicuous. (Borneo).....**exarmata***
Postocular tubercles generally absent, but sometimes present as tiny teeth just behind eyes with postocular borders behind them straight and converging; anterior border(s) laterad of collar rounded and not receding; granulation less rough. (Burma to Taiwan and Philippines).....**triangula** (Bergroth), 1889
11 (9). Postocular tubercles greatly reduced, claw-like and adhering to eyes; postocular borders straight and converging posteriorly; anterior borders of pronotum laterad of collar sinuate; body covered with dense, yellowish brown tomentum. (Borneo).....**subinermis***
Postocular tubercles normal, dentiform.....12
12(11). Posterior border of connexivum VII (♂) deeply sinuate, PE-VII angles rounded, slightly raised and converging; paratergites (♀) very short, rounded, reaching basal 1/4 of segment IX. (Thailand).....**thailandica***
Posterior border of connexivum VII (♂) different, never deeply sinuate, with PE-VII rounded, raised and converging; paratergites (♀) generally longer.....13
13(12). Exterior border of connexivum VII (♂) deeply sinuate, PE-VII produced posteriorly as narrow, rounded lobes, almost reaching tips of paratergites. (New Guinea).....**incisa***
Exterior border of connexivum VII different, never deeply sinuate; PE-VII angles never forming long, narrow, apically rounded lobes.....14
14(13). Four ridges of pronotum overhanging posteriorly interlobal, transverse depression.....15
Four ridges of pronotum not as above.....16
15(14). Four ridges of pronotum fused in pairs, separated by a deep median sulcus; PE-VII (♂) forming small, rounded lobes. (New Guinea, Australia).....**sulcata** Kormilev, 1958
Four ridges of pronotum more or less separated from each other by longitudinal depressions, of which the median is deeper; PE-VII (♂) evenly rounded, not forming small lobes. (S. China, Viet Nam, Laos, Taiwan).....**hsiaoi** Bloete, 1965
16(14). Large species, 14.0 mm or over.....17
Smaller species, at most 13.5 mm.....18
17(16). Anterior borders of pronotum receding, anterolateral angles rounded and produced laterally; antennal segment II longer than III (17:15). (Borneo).....**gigantea** Kormilev, 1955
Anterior borders of pronotum rounded, not receding; antennal segment II as long as III. (Java).....**teter** (Bergroth), 1894
18(16). Exterior borders of connexiva VI and VII together forming a continuous, evenly rounded

arc; PE-VI angles not protruding in both sexes.....19
Exterior borders of connexiva VI and VII together mostly forming an obtuse angle, or PE-VI protruding, or exterior border of connexivum VII sinuate.....23

19(18). Postocular tubercles distinctly produced beyond outer borders of eyes; anterolateral angles of pronotum expanded and rounded, lateral notch very shallow, median sulcus deep; granulation sharp and conspicuous. (Viet Nam).....**serrata***
Postocular tubercles rarely reaching outer borders of eyes; anterolateral angles of pronotum not expanded; granulation less conspicuous.....20

20(19). Labium short, not reaching base of head; lateral notch of pronotum shallow; pilosity more conspicuous; larger species (11.3–12.8 mm). (Taiwan).....**taiwanica** Kormilev, 1957
Labium longer, at least reaching base of head; lateral notch of pronotum deeper, if shallow, then median ridge of hypopygium (♂) not reaching tip of disc, and segment IX (♀) short and wide (7:18).....21

21(20). Anterior process of head longer, reaching 2/3 of antennal segment I; hypopygium (♂) relatively larger, ratio length/width 25:33; disc of hypopygium 4 × depressed along median ridge (2 + 2); segment IX (♀) relatively longer, ratio length/width 14:20. (Philippines).....**luzonica** Kormilev, 1968
Anterior process shorter, reaching 1/2 of antennal segment I; hypopygium (♂) smaller, ratio length/width 20:25 to 20:28; median ridge of hypopygium flanked by 2(1 + 1) longitudinal depressions; segment IX (♀) shorter, ratio length/width 10:20.....22

22(21). Antennae relatively longer, ratio length of antennae/width of head across eyes 2.15:1, or more; antennal segment II as long as III; hypopygium (♂) shorter, ratio length/width 17:25. (Philippines).....**longicornis***
Antennae relatively shorter, ratio length of antennae/head width across eyes 2:1, or less; antennal segment II shorter than III; hypopygium (♂) relatively longer, ratio length/width 17:23. (Philippines).....**philippinensis***

23(18). Posterior border of connexivum VII (♂) sinuate; hypopygium subtriangular, its ratio length/width 18:26. (India).....**indica***
Posterior border of connexivum VII (♂) different; hypopygium cordate, or obovate.....24

24(23). Elongate, (♀), 3.5 × as long as its maximum width; abdomen with parallel sides, paratergites (♀) short, reaching 1/3 of segment IX; ratio length/width of the latter 9:20. (Malaya).....**parallela***
Body less elongate; ratio length/width 2.7:1, or less.....25

25(24). PE-VI angles (♂) not, or barely protruding beyond outer border of connexivum VII; hypopygium moderately long, ratio length/width 1:1.4, or longer, ratio 1:1.12; segment IX (♀) narrower.....26
PE-VI angles (♂) distinctly protruding beyond outer border of connexivum VII and rounded; hypopygium (♂) short, ratio length/width 1:1.53, to moderately long, ratio 1:1.40; segment IX (♀) relatively wider.....28

26(25). Larger species, ♂ 11.0–13.0, ♀ 11.5–13.5 mm; (♀) with more parallel sides; hypopygium (♂) larger and more elongate, ratio length/width 35:49 to 38:43; segment IX (♀) ratio length/width 15:25 to 15:30; exterior border of connexivum VII (♂) slightly sinuate, then rounded; in (♀) straight, then slightly rounded. (Borneo, Celebes, Ceram, Philippines, New Guinea, Solomon Is.).....**funebra***
Smaller species, ♂ 8.0–11.0, ♀ 8.5–11.0 mm; (♀) sides slightly divergent posteriorly; hypopygium (♂) shorter, ratio length/width 28:39 to 31:43; segment IX (♀) ratio length/width 10:22 to 15:25.....27

27(26). Generally larger and more robust (10.0–11.0 mm); postocular tubercles generally produced beyond outer margin of eyes. (India, Ceylon, Thailand, Laos, Viet Nam, Malaya, Sumatra, Java, Borneo).....**membranacea** (Fabricius), 1803

Generally smaller (8.0–10.0 mm) and narrower; postocular tubercles generally not produced beyond outer margin of eyes, often even not reaching it: (Micronesia, Samoa, New Caledonia), or only reaching it: (Fiji, New Hebrides, Solomon Is., Bismarck Arch.).....**micronesica** Esaki & Matsuda, 1951

28(25). Eastern species (distributed eastward of a line from Philippines to Celebes); anterior process of head longer, reaching at least 3/4 of antennal segment I.....29

Western species (distributed westward of a line from Philippines to Celebes); anterior process of head shorter, reaching at most 2/3 of antennal segment I.....31

29(28). Exterior border of connexivum VII (♂) first sinuate, then rounded; hypopygium with fusiform median ridge, reaching 5/6 of disc; exterior borders of connexiva VI and VII (♀) straight, segment IX wider posteriorly. (Palau, New Guinea, Bismarck Arch., Solomon Is., New Hebrides).....**subtriangula** Kormilev, 1957

Exterior border of connexivum VII (♂) straight, then rounded; median ridge of hypopygium narrower and with parallel sides; segment IX (♀) longer and narrower posteriorly.....30

30(29). Larger species, over 10.0 mm; body with subparallel sides; median ridge of hypopygium reaching 2/3 of disc; segment IX (♀) tricuspidate, valves as long as oviduct; paratergites reaching middle of segment IX. (Solomon Is.).....**solomonensis***

Smaller species, less than 8.5 mm; body widening posteriorly in both sexes; median ridge of hypopygium reaching 3/4 of disc; segment IX (♀) incised posteriorly, oviduct much shorter than valves; paratergites (♀) reaching from 2/3 to 3/4 of segment IX. (New Guinea).....**rossi***

31(28). Hypopygium larger, 31:40, obovate, with triangular median ridge, reaching 4/7 of disc. (Thailand).....**breviceps***

Hypopygium smaller, 28:38, cordate, with a fusiform median ridge, reaching 3/4 of disc. (Burma).....**burmensis***

Mezira (Zemira) hispida Kormilev, new species Fig. 28–30.

♂. Macropterous. Elongate ovate, densely granulate and covered with long, erect setae.

Head shorter than its width across eyes (♂ 40:43, ♀ 40:42.5); anterior process stout, with parallel sides, incised anteriorly, reaching 3/5 of antennal segment I; antenniferous tubercles acute, divergent. Eyes large, semiglobose, protruding. Postocular tubercles thin, acute, slightly produced beyond outer borders of eyes; vertex densely granulate. Antennae thin, relative length of antennal segments I to IV: ♂ 20:23:25:21, ♀ 20:24:27:23. Labium reaching hind border of labial groove, which is open posteriorly.

Pronotum half as long as wide (♂ 48:100, ♀ 52:103), fore lobe much narrower than hind lobe (♂ 75:100, ♀ 75:103); collar thin, granulate; anterior borders laterad of collar slightly convex, crenulate, and slightly receding; anterolateral angles produced laterally as small angular, or rounded lobes; lateral notch deep, angular; lateral borders of hind lobe parallel, converging anteriorly; hind border deeply sinuate medially. Fore disc with 3 longitudinal sulci between 4(2 + 2) high ridges. Interlobal depression deep and narrow, hind disc granulate.

Scutellum shorter than its basal width (♂ 45:57, ♀ 50:60). Lateral borders thinly carinate, straight, tip incised; disc with a median carina, granulate and transversely rugose laterad of it.

Hemelytra reaching 3/4 of tergum VII in both sexes; corium with an acute apical angle, and straight apical border; disc finely granulate.

Abdomen ovate in both sexes, longer than width across segment IV (♂ 143:116, ♀ 151:123). Connexivum wide and densely punctured, hind borders of connexiva II to VI carinate, exterior borders crenulate; PE-angles II to VI barely protruding, rounded; PE-VII rounded. Paratergites (♂) cylindrical, minute, diverging, reaching 1/2 of cordate hypopygium; the latter shorter than wide (24:32), with a triangular, median ridge not reaching tip of disc and flanked by 2(1 + 1) deep depressions. Paratergites (♀) angular, with crenulate borders, reaching basal 1/3 of segment IX; the latter shorter than wide (10:18), tricuspidate. Spiracles II to VIII ventral and not visible from above.

Legs. Femora with a double row of strong teeth inferiorly, granulate and setigerous on upper side.

Color: black; membrane white, black at base; labium and tarsi dark brown.

Total length: ♂ 11.16, ♀ 12.40 mm; width of pronotum ♂ 4.00, ♀ 4.12 mm; width of abdomen ♂ 4.64, ♀ 4.92 mm.

Holotype ♂ (BISHOP 8983), Sabah (N. Borneo), Tenompok, 1460 m, Jesselton, 48 km (31 mi.) E, 26–31.I.1959, T.C. Maa coll.

Allotype ♀ (BISHOP), same locality, 2–4.II.1959, T. C. Maa coll.

Paratypes: 13 ♂♂, 14 ♀♀, same locality, 20 ♂♂, 23 ♀♀ & 21 nymphs, 48 km E of Jesselton, same time and collector (BISHOP).

The affinity of *Mezira (Zemira) hispida* n. sp. is seen from the key.

Mezira (Zemira) kerzhneri Kormilev, new species

♀. Macropterous. Elongate ovate, with parallel sides, covered with rough, setigerous granulation; setae short, stiff and erect.

Closely related to *Mezira hispida* n. sp., from Borneo, but smaller, setae shorter and stiffer; postocular tubercles almost absent; anterolateral angles of pronotum rounded and more convergent, without lateral, angular projections; 4 ridges of fore lobe of pronotum lower, and inner ones with elongate callosities, absent in *M. hispida.* Segment IX (♀) shorter and wider at base.

Measurements: head 47:45, relative length of antennal segments I to IV: 25:30:28:25; pronotum 60:116, ratio width of fore lobe/width of hind lobe 78:116; scutellum 50:52; abdomen 158:118; segment IX (♀) 12:25.

Anterior process reaching 3/5 of antennal segment I; postocular tubercles very small and adhering to eyes so that postocular borders look unarmed. Labium reaching hind border of labial groove, which is closed posteriorly. Spiracles all ventral and not visible from above. All femora with 2 rows of teeth on apical 1/2 inferiorly.

Color: ferrugineous; membrane covered with milky-white incrustation.

Total length: 11.18 mm; width of pronotum 4.14 mm; width of abdomen 4.21 mm.

Holotype ♀ (Zoological Institute, Academy of Sciences USSR, Leningrad), Malaya, Perak, (date and collector unknown).

It is a pleasure to dedicate this curious species to Dr I. M. Kerzhner, of the Institute mentioned above, by whose kind offices I have received this, and some other unidentified Aradidae, from the collections under his charge.

Mezira (Zemira) quadridentata Kormilev, new species Fig. 31.

Artabanus quadrispinosus Bloete (not Bergroth), 1965, *Zool. Verh.* **75:** 27.

Hammatoneurum quadrispinosum Bloete, 1965, *Zool. Verh.* **75:** 27, (nomen nudum).

Bloete erected the genus *Hammatoneurum* on the basis of a species, which he erroneously identified as *Artabanus quadrispinosus* Bergroth, 1894. (Bergroth gives the following characters for *Artabanus quadrispinosus:* "caput subaequilongum ac latum...antennis gracilisculis...articulo primo apicem capitis subattingente, secundo primo paullo longiore, tertio secundo tenuiore et paullo breviore, quarto tertio subaequilongo..."). The specimen identified by Bloete as *Artabanus quadrispinosus* Bergroth has antennal segment I 1/3 longer than the anterior process, and the relative length of antennal segments I to IV as: 15:15:18.5:17, and does not coincide with Bergroth's description. I had an opportunity to examine Bloete's specimen and it belongs to the genus *Mezira* A. S., and not to *Artabanus* Stål. Bloete did not give the description of his species. He only stated that it was *Artabanus quadrispinosus* Bergroth, so his genus was based on a *nomen nudum,* besides being synonymous with *Mezira* A. S., 1843, so I named it *Mezira (Zemira) quadridentata* n. sp.

♂. Macropterous. Elongate ovate, slightly widening posteriorly; covered with dispersed setigerous granulation, hairs very short and curled.

Head shorter than width across eyes (28:35); anterior process slender, incised anteriorly, reaching 2/3 of antennal segment I; antenniferous tubercles dentiform, blunt, slightly divergent, reaching basal 1/5 of antennal segment I. Eyes large, semiglobose. Postocular tubercles small, acute, not reaching outer borders of eyes; infraocular carinae low, crenulate; vertex raised, granulate. Antennae long, relative length of antennal segments I to IV: 15:15:18.5:17; labium not reaching hind border of labial groove, which is closed posteriorly; labial atrium slit-like.

Pronotum less than 1/2 as long as its maximum width (32:70), fore lobe narrower than hind lobe (52:70). Collar distinctly separated from disc; anterolateral angles slightly expanded, rounded and crenulate; lateral borders of fore lobe slightly diverging forward, lateral notch forming an obtuse angle, lateral borders of hind lobe subparallel, slightly convex, strongly convergent anteriorly; hind border deeply sinuate. Fore disc granulate, with a narrow median sulcus, and laterad of it with 4(2 + 2) low, large elevations; hind disc granulate.

Scutellum shorter than its basal width (35:40); all borders carinate, tip angular; disc with a thin median carina, laterad of it granulate.

Hemelytra almost reaching hind border of tergum VII; corium with basolateral border slightly sinuate and crenulate, its apical border straight, apical angle blunt; veins of corium finely granulate; membrane without hairs.

Abdomen longer than its maximum width across segment V (110:80). Lateral borders slightly convex; PE-angles barely protruding; PE-VII rounded and slightly sinuate laterad of paratergites; discs of connexiva scabrous, rugose exteriorly. Paratergites clavate, reaching 2/3 of a cordate hypopygium; the latter shorter than wide (22:29), with a very short median ridge, reaching 2/5 of disc, and another posteriorly of it, reaching 4/5 of disc. Spiracles all ventral and not visible from above. Metathoracic scent-gland openings small, linear, closed.

Legs. Middle and hind femora with a strong tooth and a few smaller teeth.

Color: uniformly testaceous; membrane white, infuscate in middle; coxae, tarsi and labium yellowish brown.

Total length: 7.43 mm; width of pronotum 2.50 mm; width of abdomen 2.86 mm.

Holotype ♂ (Rijksmuseum van Natuurlijke Historie, Leiden), Sumatra.

Mezira (Zemira) armigera Kormilev, new species Fig. 24–25.

♂. Macropterous. Elongate ovate, widening posteriorly; head, pronotum, scutellum, and veins of corium granulate; partly covered with short, curled hairs.

Closely related to *Mezira (Zemira) quadridentata* n. sp., but head relatively longer; anterolateral angles of pronotum very slightly expanded and angularly rounded, neither produced anteriorly, nor posteriorly; posterior border of pronotum deeply sinuate; membrane with a few small tubercles and sparse, scattered, short, curled hairs. Connexivum VII (♂) evenly rounded posteriorly, not sinuate; hypopygium relatively smaller and narrower. Membrane black, not white, labium not reaching posterior border of labial groove, which is open posteriorly. Middle and hind femora with strong spines. Spiracles all ventral and not visible from above.

Measurements: head ♂ 28:31, ♀ 31:32.5; relative length of antennal segments I to IV: ♂ 15:15:17:15, ♀ 15:15:17.5:15; pronotum ♂ 33:68, ♀ 36:74, ratio width of fore lobe/width of hind lobe: ♂ 50:68, ♀ 55:74; scutellum ♂ 35:38, ♀ 40:42; abdomen ♂ 108:80, ♀ 122:91, both across segment V; hypopygium 17:23. Male from Luzon has slightly shorter antennal segment III, relative length: 14:15:15:15.

Color: ferrugineous; connexivum and venter reddish brown; membrane black.

Total length: ♂ 7.40, ♀ 8.14 mm; width of pronotum ♂ 2.42, ♀ 2.64 mm; width of abdomen ♂ 2.85, ♀ 3.25 mm.

Holotype ♂ (BISHOP 8984), Philippines, Camarines Sur, Mt Isarog, 750–800 m, 19.IV.1963, light trap, H. M. Torrevillas coll.

Allotopotype ♀ and 2 paratopotypes ♀♀, collected with holotype (BISHOP); 1 ♂, Philippines, Luzon, Los Baños, 19–20.IX.1959, L. W. Quate coll.

Mezira (Zemira) sumatrensis Kormilev, new species

♀. Macropterous. Elongate ovate, roughly but sparsely granulate and covered with moderately long, stiff, bristles.

Head as long as wide across eyes; anterior process tapering forward, slightly notched apically, reaching slightly over basal 1/3 of antennal segment I; antenniferous tubercles strong, dentiform, with parallel outside borders; eyes semiglobose; postocular tubercles small, adherent to eyes, not reaching outer borders of the latter; vertex roughly granulate. Antennae 3 × as long as head width across eyes, roughly granulate. Labium not reaching hind border of labial groove, which is open posteriorly.

Pronotum much shorter than wide; collar produced forward and truncate; anterolateral angles subangularly rounded, slightly receding, and roughly granulate. Lateral notch shallow, obtuse; lateral borders of hind lobe parallel, convergent anteriorly; hind border deeply sinuate. Fore disc with 4(2 + 2) stout, granulate ridges; hind disc roughly, but sparsely granulate.

Scutellum: median ridge with parallel sides, disc laterad of it transversely rugose and granulate.

Hemelytra reaching 1/2 of tergum VII; corium with apical border slightly sinuate interiorly, apical angle acute.

Abdomen longer than width across segment V; lateral borders parallel from II to V, evenly rounded on VI and VII; connexiva III to VII smooth exteriorly, rugose interiorly; PE-angles barely protruding, blunt; tergum VII raised posterolaterally, and with a transverse, granulate ridge along hind border. Paratergites rounded and granulate, reaching 2/5 of segment IX. All spiracles ventral and not visible from above.

Legs. Unarmed.

Measurements: head 53:53; relative length of antennal segments I to IV: 45:45:42:30; pronotum 82:138, ratio width of fore lobe/width of hind lobe 98:138; scutellum 65:73; abdomen across segment V 192:157; segment IX 13:30.

Color: black; connexiva III to VII dark chestnut brown interiorly.

Total length: 14.0 mm; width of pronotum 4.90 mm; width of abdomen 5.60 mm.

Holotype ♀ (Zoological Institute, Academy of Sciences USSR, Leningrad), Sumatra, ex Breddin collection, has a label: "Mezira angusticeps Kiritshenko det." a nomen nudum.

Mezira (Zemira) sumatrensis n. sp. is related to *Mezira pilifera* Kormilev, 1967, from Laos, but it is much larger, the anterior process of the head is much shorter, and the antennae are relatively longer.

Mezira (Zemira) exarmata Kormilev, new species Fig. 32–34.

♀. Macropterous. Elongate ovate with very prominent, round granulations, and sparse, moderately long, erect bristles.

Head almost as long as its width across eyes (46:45); anterior process thin, tapering, incised anteriorly, reaching 2/5 of antennal segment I; antenniferous tubercles stout, with slightly diverging tips. Eyes large, semiglobose. Postocular tubercles absent, postocular borders straight, converging posteriorly. Vertex granulate. Antennae strong; relative length of antennal segments I to IV: 30:35:34:25; labium reaching hind border of labial groove, which is open posteriorly.

Pronotum much shorter than wide (63:112.5); collar granulate, protruding anteriorly; anterior borders laterad of it almost straight, granulate and receding; anterolateral angles rounded; lateral notch shallow; lateral borders of hind lobe slightly convex; hind border deeply sinuate in middle. Fore disc with 4(2 + 2) large, granulate ridges; interlobal depression narrow and deep, hind disc very roughly granulate.

Scutellum shorter than wide (53:60); lateral borders straight, carinate, tip excavated; disc raised medially, but without clear, median ridge, transversely rugose and granulate.

Hemelytra reaching middle of tergum VII; apical angle of corium acute, apical border slightly sinuate.

Abdomen much longer than its maximum width across segment IV (157:125), ovate; discs of connexiva rugose exteriorly, granulate interiorly; exterior borders of connexiva straight on II to VI, slightly convex on VII; PE-angles slightly protruding, blunt; PE-VII rounded. Paratergites small, rounded, reaching slightly over base of segment IX; the latter tricuspidate, 1/2 as long as its basal width (13:25). Venter deeply punc-

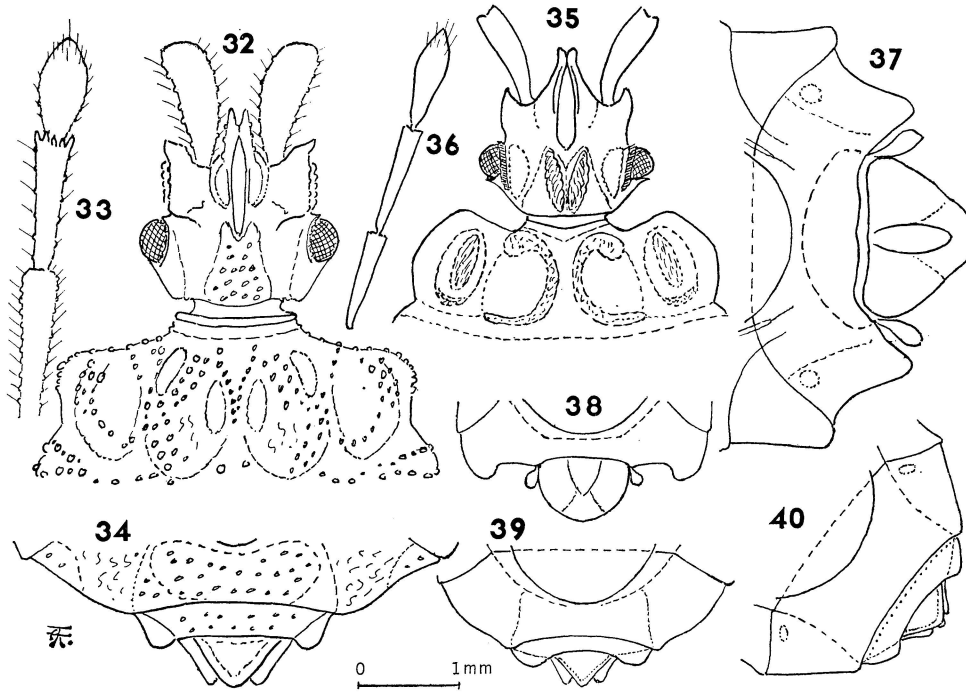


Fig. 32–40. 32, *Mezira exarmata* n. sp., ♀, head and pronotum; 33, same, antenna; 34, same, tip of abdomen from above; 35, *M. subinermis* n. sp., ♂, head and pronotum; 36, same, antenna; 37, same, tip of abdomen from above; 38, *M. thailandica* n. sp., ♂, tip of abdomen from above; 39, same, ♀, tip of abdomen from above; 40, *M. parallela* n. sp., ♀, tip of abdomen from above.

tured, granulate among punctures; sterna III to VI with a wide, subtriangular, elevated, smooth spot in middle of posterior border. All spiracles ventral and not visible from above.

Legs. Granulate; without teeth.

Color: pitchy black; labium and tarsi brown; membrane black with brown rim posteriorly.

Total length: 13.0 mm; width of pronotum 4.50 mm; width of abdomen 5.00 mm.

Holotype ♀ (Bishop 8985), Borneo, Sarawak, Kampong Pueh, Lundu District, 690–1500 m, 25–31.V.1958, T. C. Maa coll.

Mezira (*Zemira*) *exarmata* n. sp. may be separated from other species by the lack of postocular tubercles, and the large size.

Mezira (**Zemira**) **triangula** (Bergroth), 1889, new combination

Brachyrhynchus triangulus Bergroth, 1889, *Ann. Mus. Civ., Genova* **26:** 736.

Mezira triangula: Kormilev, 1955, *Mushi* **28:** 37.

DISTRIBUTION: Burma to Taiwan and Philippines.

In the collections of the Bishop Museum there are many specimens from India (Darjiling), China (Hainan), Thailand, Laos, Malaya, Borneo (Sarawak), and Philippines.

Mezira (**Zemira**) **subinermis** Kormilev, new species Fig. 35–37.

♂. Macropterous. Elongate ovate, slightly widening posteriorly; ♀ with parallel sides. Mostly covered with dense, gold-brown tomentum.

Head shorter than width across eyes (♂ 46:49, ♀ 46:52); anterior process conical, slightly incised anteriorly,

reaching 1/2 of antennal segment I; antenniferous tubercles acute, slightly converging. Eyes semiglobose, protruding. Postocular tubercles greatly reduced to minute, claw-like spines, adhering to eyes, not reaching outer borders of latter. Infraocular carinae low, finely crenulate; vertex raised, very finely granulate, slightly depressed medially and covered with tomentum. Antennae long and thin; relative length of antennal segments I to IV: ♂ 30:30:31:25, ♀ 29:29:29:24. Labium long, reaching over fore border of prosternum; labial groove open posteriorly; labial atrium open.

Pronotum 1/2 as long as its maximum width (♂ 55:114, ♀ 54:113); fore lobe narrower than hind lobe (♂ 90:114, ♀ 90:113). Collar thin, sinuate anteriorly; anterolateral angles slightly expanded, rounded and produced anteriorly slightly beyond collar, and laterally. Lateral notch angular; lateral borders of hind lobe parallel, roundly convergent anteriorly; hind border deeply sinuate in middle. Fore disc with X-shaped ridge in middle, and 2(1 + 1) ovate, high ridges laterally; median sulcus thin and shallow; hind disc slightly depressed in middle and raised at humeri.

Scutellum shorter than its maximum width (♂ 51:60, ♀ 51:60); lateral borders carinate and slightly sinuate, tip rounded; disc with a T-shaped median carina.

Hemelytra reaching 1/2 of tergum VII (♂), or hind border of tergum VI (♀); corium with apical angle acute, apical border slightly sinuate; membrane with veins covered with sparse, short setae.

Abdomen ovate, longer than its maximum width across segment VI (♂), or V (♀). Connexivum moderately wide, with segments progressively increasing from II to VII; PE-angles not protruding on II to V (♂), produced and rounded on VI, forming a lobe with rounded tip on VII; exterior borders of connexiva II to V slightly convex, VI almost straight, VII sinuate. Paratergites small, clavate, reaching 1/2 of cordate hypopygium. In ♀, exterior borders of connexiva II to VII slightly convex; paratergites triangular, blunt, reaching basal 1/3 of segment IX, which is tricuspidate posteriorly. All spiracles ventral and not visible from above.

Legs. Unarmed.

Color: dark brown; outer borders of connexiva, antennae, ventral side of body, and legs reddish brown; tarsi and labium yellow.

Total length: ♂ 10.8, ♀ 11.2 mm; width of pronotum ♂ 4.00, ♀ 4.00 mm; width of abdomen ♂ 4.1, ♀ 4.2 mm.

Holotype ♂ (BISHOP 8986), Sabah (N. Borneo), Tawau, Quion Hill, Cocoa Res. Sta., 7.IX.1962, Y. Hirashima coll.

Allotopotype ♀, and paratopotypes: 2 ♂♂ & 2 ♀♀, collected with holotype (BISHOP).

Mezira (Zemira) subinermis n. sp. is a very singular species; it has an open atrium, a rarity in the genus *Mezira* A. S., and greatly reduced, claw-like postocular tubercles, which separate it from other species in the genus.

Mezira (Zemira) thailandica Kormilev, new species Fig. 38–39.

♂. Macropterous. Elongate subtriangular, tapering from abdominal segment VI anteriorly; connexivum VII (♂) deeply incised postero-interiorly, PE-VII forming rounded, converging lobes. ♀ elongate ovate, PE-VII rounded, without lobes.

Head almost as long as its width across eyes (♂ 29:30, ♀ 35:37); anterior process slightly constricted laterally, rounded and slightly incised apically, reaching 3/5 of antennal segment I; antenniferous tubercles moderate in size, convergent; eyes large, semiglobose; postocular tubercles small, blunt, not reaching outer border of eyes; vertex with a few rows of fine, setigerous granulation. Antennae moderately strong; relative length of antennal segments I to IV: ♂ 15:14:17.5:14, ♀ 18:16:21:17.5. Labial atrium closed; labium reaching hind border of a long labial groove, which is open posteriorly.

Pronotum much shorter than its maximum width (♂ 35:61, ♀ 51:72.5); fore lobe narrower than hind lobe (♂ 47:61, ♀ 60:72.5); collar distinct, anterolateral angles narrowly expanded and rounded, lateral notch forming an obtuse angle; lateral borders of hind lobe parallel, converging anteriorly; hind border trisinuate, middle sinus the deepest. Fore disc with 4(2 + 2) low, granulate ridges; hind disc granulate.

Scutellum shorter than its basal width (♂ 30:33, ♀ 43:43); lateral borders straight, tip incised; disc with a T-shaped median ridge, granulate laterad of it.

Hemelytra reaching 2/3 of tergum VII; corium with apical angle rounded, apical border slightly convex exteriorly, sinuate interiorly.

Abdomen longer than its maximum width (♂ 97:73, ♀ 126:95). ♂, lateral borders slightly convex, PE-angles not protruding; connexivum VII convex exteriorly, sinuate interiorly, forming in the middle, rounded lobes, which are directed posteriorly; paratergites small, clavate, reaching basal 1/3 of hypopygium; the latter rounded posteriorly, shorter than wide (15:25), and deeply depressed medially, its median ridge triangular, reaching 3/5 of disc. ♀, abdomen ovate, PE-VII rounded; paratergites short, rounded posteriorly, reaching basal 1/3 of tricuspidate segment IX, the latter short and wide (7:17). Spiracles ventral and not visible from above. Sternum VI (♂) widely and deeply sinuate posteriorly, medially 1/2 as long as sternum V.

Legs. Unarmed, claws without arolia.

Color: uniformly ferrugineous, venter yellowish brown, membrane black.

Total length: ♂ 6.89, ♀ 8.75 mm; width of pronotum ♂ 2.18, ♀ 2.80 mm; width of abdomen ♂ 2.61, ♀ 3.40 mm.

Holotype ♂ (BISHOP 8987), Thailand, Pakchong, 100 m, NE of Bangkok, 2.XII.1957, J. L. Gressitt coll.

Allotopotype ♀, and 12 ♂♂ & 13 ♀♀ paratopotypes, collected with holotype (BISHOP).

Mezira (*Zemira*) *thailandica* n. sp. is a distinct species, particularly in the males which have the curiously shaped connexivum VII, resembling some species of *Daulocoris* Usinger & Matsuda, 1959.

Mezira (**Zemira**) **incisa** Kormilev, new species Fig. 41.

♂. Macropterous. Closely related and similar to *Mezira* (*Zemira*) *membranacea* (F.), 1803, but connexivum VII deeply sinuate, PE-VII forming narrow, apically rounded lobes, slightly shorter than paratergites; PE-VI angles rectangular, with rounded tips; paratergites cylindrical, minute, divergent, reaching almost to 1/2 of hypopygium.

Anterior process of head reaching 2/3 of antennal segment I; postocular tubercles dentiform, blunt, slightly produced beyond outer borders of eyes. Labium slightly produced beyond hind border of labial groove. Other characters as in *N. membranacea* (F.).

Measurements: head 36:40; relative length of antennal segments I to IV: 15:20:18:– (IV is missing); pronotum 40:82.5, ratio width of fore lobe/width of hind lobe 63:82.5; scutellum 46:52; abdomen 135:90 across segment VI; hypopygium 32:35.

Color: black to piceous; pilosity very fine, rusty and curled.

Total length: 10.24 mm; width of pronotum 3.30 mm; width of abdomen 3.60 mm.

Holotype ♂ (BISHOP 8988), NW New Guinea, Nabire, S. Geelvink Bay, 10 m, 25–27.VIII.1962, J. Sedlacek coll.

Mezira (**Zemira**) **sulcata** Kormilev, new combination

Mezira sulcata Kormilev, 1958, *J. N. Y. Ent. Soc.* **66:** 91.

DISTRIBUTION: Australia.

In the collections of the Bishop Museum there are many specimens from Australia (Queensland), and 2 from New Guinea (West).

Mezira (**Zemira**) **hsiaoi** Bloete, 1965, new combination

Mezira membranacea Hsiao (not Fabricius), 1964, *Acta Ent. Sinica* **13:** 597.

Mezira hsiaoi Bloete, 1965, *Zool. Verh.* **75:** 36.

DISTRIBUTION: China (Kwangtung), Viet Nam, Laos.

In the collections of the Bishop Museum there are many specimens from Taiwan, Viet Nam, Laos.

Mezira (**Zemira**) **teter** (Bergroth), 1894, new combination

Dysodius orientalis Herrich-Schaeffer, 1848, *Wanz. Ins.* **8:** 123, f. 890. (?)

Brachyrhynchus teter Bergroth, 1894, *Ent. Tidscr.* **15:** 106.

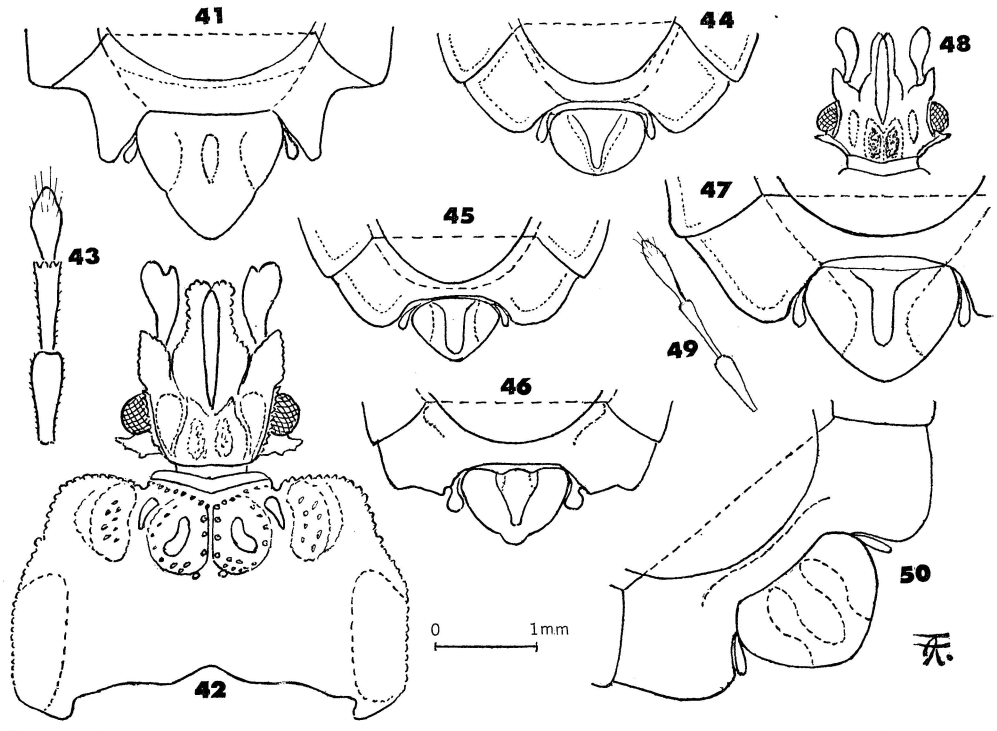


Fig. 41–50. 41, *Mezira incisa* n. sp., ♂, tip of abdomen from above; 42, *M. serrata* n. sp., ♀, head and pronotum; 43, same, antenna; 44, *M. longicornis* n. sp., ♂, tip of abdomen from above; 45, *M. philippinensis* n. sp., ♂, tip of abdomen from above; 46, *M. indica* n. sp., ♂, tip of abdomen from above; 47, *M. solomonensis* n. sp., ♂, tip of abdomen from above; 48, *M. rossi* n. sp., ♀, head; 49, same, antenna; 50. *M. burmensis* n. sp., ♂, tip of abdomen from above.

Mezira teter: Usinger & Matsuda, 1959, Class. Aradidae: 381.

DISTRIBUTION: Java.

I had an opportunity to examine 2 specimens from the collections of the British Museum (N. H.) identified as *Mezira teter* (Bergroth). Both specimens are smaller than indicated by Bergroth; both are from Java, ♂ 11.18 mm, and ♀ 11.54 mm. (Bergroth indicated a ♂ as 14.0 mm). It is difficult to say if these specimens are really *M. teter* without comparing them with the type. The male lacked the curious pattern of carina and tomentum on the venter, so it belongs to *Mezira*, not *Chrysodaspis* n. g., described elsewhere in this paper.

Mezira (Zemira) serrata Kormilev, new species Fig. 42–43.

♀. Macropterous. Elongate ovate; head, pronotum, scutellum, and veins of corium roughly granulate; connexivum deeply punctured; pilosity very short and curled.

Head as long as width across eyes (45:45); anterior process dilated, rounded and incised anteriorly, reaching 3/4 of antennal segment I; antenniferous tubercles short, blunt, with parallel exterior borders. Eyes semiglobose. Postocular tubercles strong, dentiform, produced beyond outer borders of eyes. Vertex granulate. Antennae moderately long; relative length of antennal segments I to IV: 19:22:23:17. Labium almost reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as its maximum width (45:98); fore lobe narrower than hind lobe (82:98); collar prominent; anterolateral angles slightly expanded, rounded, not reaching fore border of collar; lateral

notch very shallow; interlobal depression narrow and deep; lateral borders of hind lobe slightly convex, convergent anteriorly; hind border deeply sinuate in middle. Fore disc with a deep and narrow median sulcus, and 4(2 + 2) large ridges laterad of it; hind disc roughly granulate.

Scutellum shorter than wide (49:55); lateral borders carinate, convex at base, sinuate near apex; the latter incised; disc with a low and narrow median carina on hind 2/3, roughly granulate elsewhere.

Hemelytra reaching 1/2 of tergum VII; apical angle of corium rounded, apical border slightly convex exteriorly and sinuate interiorly.

Abdomen ovate, longer than its maximum width across segment IV (145:115); lateral borders evenly rounded; PE-angles not protruding, PE-VII rounded. Paratergites rounded posteriorly, reaching 1/2 of segment IX; the latter short and wide at base (11:24), rounded posteriorly. All spiracles ventral and not visible from above.

Legs. Unarmed, finely granulate.

Color: black to piceous; labium and tarsi yellowish brown.

Total length: 11.76 mm; width of pronotum 3.92 mm; width of abdomen 4.60 mm.

Holotype ♀ (Bishop 8989), Viet Nam, Ban Me Thuot, 16–18.V.1960, R. E. Leech coll.

Mezira (*Zemira*) *serrata* n. sp. stands rather isolated from other species in the subgenus; the shape of the pronotum and the very rough granulation separates it from other species.

Mezira (**Zemira**) **luzonica** Kormilev, new combination

Mezira luzonica Kormilev, 1969, *Quart. J. Taiwan Mus.* **21**(3–4): 231, fig. 6–7.

DISTRIBUTION: Philippines (Luzon).

In the collections of the Bishop Museum there are large series from Philippines (Mountain Prov., Misamis Or. and Mindanao).

Mezira (**Zemira**) **longicornis** Kormilev, new species Fig. 44.

♂. Macropterous. Elongate ovate, slightly widening posteriorly; pilosity short and curled.

Head almost as long as width across eyes (♂ 36:35, ♀ 36:35.5); anterior process short, with parallel sides, incised anteriorly, reaching 1/2 of antennal segment I; antenniferous tubercles straight exteriorly, slightly diverging; eyes large, protruding; postocular tubercles minute, adherent to eyes, not reaching outer border of the latter; vertex granulate; postocular borders behind tubercles rounded. Antennae long, relative length of antennal segments I to IV: ♂ 19:19:19:18, ♀ 19:19:19:20. Labium reaching hind border of labial groove, which is open posteriorly.

Pronotum half as long as its maximum width (♂ 38:77, ♀ 45:89). Collar with indistinct granulation; anterolateral angles angularly rounded, crenulate, neither produced anteriorly, nor laterally; lateral notch sinuate; interlobal depression moderately deep; lateral borders of hind lobe parallel, converging anteriorly; hind border deeply sinuate medially, angularly rounded laterally. Fore disc with 4(2 + 2) semifused, low ridges; hind disc finely granulate, excepting posteriorly in the middle. Fore lobe narrower than hind lobe (♂ 57:77, ♀ 62:89).

Scutellum shorter than its basal width (♂ 35:42, ♀ 45:50); lateral borders almost straight, tip angular; disc with a thin and low median carina, granulate and transversely rugose laterally.

Hemelytra reaching 3/4 (♂), or 1/2 (♀) or tergum VII; apical angle of corium acute, apical border slightly convex exteriorly, sinuate interiorly, disc granulate.

Abdomen longer than its maximum width across segment IV (♂ 105:83, ♀ 132:104); lateral borders straight (♂), or slightly convex (♀); PE-angles II to VI not protruding, PE-VII rounded. Paratergites (♂) very small, reaching basal 1/3 or hypopygium, the latter shorter than wide (17:25), rounded posteriorly; median ridge triangular, not reaching tip of disc, flanked by 2(1 + 1) deep depressions. Paratergites (♀) rounded posteriorly, reaching 1/2 of a rounded posteriorly segment IX. Discs of connexiva uneven. Spiracles all ventral and not visible from above.

Legs. Unarmed.

Color: sepia brown, or very dark ferrugineous; labium and tarsi yellowish brown; membrane black.

Total length: ♂ 8.80, ♀ 10.80 mm; width of pronotum ♂ 3.08, ♀ 3.56 mm; width of abdomen ♂ 3.32, ♀ 4.16 mm.

Holotype ♂ (BISHOP 8990), Philippines, Mt Makiling, 17.III.1960, T. C. Maa coll.

Allotype ♀, Philippines, Negros Or., L. Balinsasayao, 1–7.X.1959, C. M. Yoshimoto coll. (BISHOP).

Mezira (*Zemira*) *longicornis* n. sp. which belongs to the "luzonica group," differs from *M. luzonica* Kormilev, 1969, by the smaller size, the shorter anterior process, and the different hypopygium.

Mezira (Zemira) philippinensis Kormilev, new species Fig. 45.

♂. Macropterous. Closely related to *M. longicornis* n. sp. but smaller, postocular tubercles small, but dentiform, not adhering to eyes, not reaching outer borders of the latter; antennal segment II shorter than III; antennae less than 2 × as long as head width across eyes. Hypopygium relatively longer. Fore lobe of pronotum more convex, apical angle of corium rounded, apical border more convex exteriorly, and more sinuate interiorly. Other characters similar in both species. All spiracles ventral and not visible from above.

Measurements: head ♂ 28:32, ♀ 31:33; relative length of antennal segments I to IV: ♂ 13:14:16:16.5, ♀ 14:14:17:17.5; pronotum ♂ 39:75, ♀ 43:82; fore lobe narrower than hind lobe ♂ 55:75, ♀ 55:82; scutellum ♂ 41:45, ♀ 45:50; abdomen ♂ 100:79, ♀ 113:93; hypopygium 17:23.

Color: very dark ferrugineous; labium and tarsi brown.

Holotype ♂ (BISHOP 8991), Philippines, Camarines Sur, Mt Isarog, 750–800 m, 18.IV.1963, H. M. Torrevillas coll.

Allotopotype ♀, collected with holotype (BISHOP).

Mezira (Zemira) indica Kormilev, new species Fig. 46.

Crimia lateralis Bloete (not Walker), 1965, *Zool. Verh.* **75:** 28.

Daulocorisella lateralis: Bloete, 1965, *Zool. Verh.* **75:** 28 (*nomen nudum*).

Here we have a case similar to *Hammatoneurum* Bloete, 1965. *Daulocorisella* Bloete, 1965, was based on a misidentified species, which was left without a description, and so is a *nomen nudum*. I had an opportunity to examine the types of both *Daulocorisella lateralis* Bloete and *Crimia lateralis* Walker, 1873; they are 2 different species. The first I propose to name *Mezira* (*Zemira*) *indica* n. sp., and the second was transferred to the genus *Mezira* A. S. earlier in this paper. The genus *Daulocorisella* Bloete is suppressed as based on an unvalidated species, and it is also synonymous with *Mezira* A. S., 1843.

♂. Macropterous. Elongate ovate, widening posteriorly until segment V, then convergent. Head, antennae, pronotum, scutellum, veins of corium, and legs, with setigerous granulation, setae very short and curled.

Head almost as long as width across eyes (30:29); anterior process with parallel sides, slightly notched anteriorly, reaching 2/3 of antennal segment I; antenniferous tubercles acute, subparallel exteriorly. Eyes large, semiglobose. Postocular tubercles small, acute, not reaching outer borders of eyes; infraocular carinae moderately high, crenulate; vertex transversely rugose medially, granulate laterally. Antennae slender; relative length of antennal segments I to IV: 15:13:17.5:14; labium reaching hind border of labial groove, which is open posteriorly; labial atrium slit-like, closed.

Pronotum less than 1/2 as long as its maximum width (27:60); fore lobe narrower than hind lobe (48:60). Collar prominent; anterolateral angles slightly expanded, rounded, neither produced anteriorly, nor posteriorly; lateral notch obtuse; lateral borders of hind lobe slightly convex, converging anteriorly; hind border deeply sinuate medially. Fore disc with a median sulcus flanked by 4(2 + 2) low, granulate ridges; hind disc granulate.

Scutellum almost as long as its basal width (33:34); all borders carinate, lateral barely sinuate before tip; the latter incised; disc with a low, T-shaped median carina, granulate laterad of it.

Hemelytra reaching 4/5 of tergum VII; basolateral border of corium thinly carinate and sinuate exteriorly; apical angle narrowly rounded, apical border almost straight; membrane with small tubercles and a few, very short, single, curled hairs.

Abdomen longer than wide across segment V (103:78); lateral borders slightly convex from II to VII, the latter angularly rounded in the middle, slightly sinuate mesad of angle; PE-angles not, or slightly protruding, PE-VII angular, reaching basal 1/4 of paratergites; the latter small, clavate, reaching slightly over 1/2 of cordate hypopygium. Hypopygium shorter than wide (18:28), with median ridge reaching 2/3 of disc. All spiracles ventral and not visible from above.

Legs. Femora unarmed; arolia absent.

Color: ferrugineous; connexivum, venter, labium and tarsi light ferrugineous; membrane black.

Total length: 7.0 mm; width of pronotum 2.14 mm; width of abdomen 2.79 mm.

Holotype ♂ (Rijksmuseum van Natuurlijke Historie, Leiden), C. E. India, Orissa, Teypone, 1775′, IX.1958, P. Susai Nathan coll.

Mezira (Zemira) parallela Kormilev, new species Fig. 40.

♀. Macropterous. Elongate, with parallel sides, densely granulate.

Head shorter than width across eyes (31:35); anterior process tapering forward, tip slightly incised, reaching 3/5 of antennal segment I; antenniferous tubercles short, dentiform, with parallel outer borders. Eyes large, globose, protruding. Postocular tubercles slender, acute, almost reaching outer borders of eyes; vertex granulate. Antennae moderately strong; relative length of antennal segments I to IV: 16.5:16:15:20; labium reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as its maximum width (30:73); fore lobe narrower than hind lobe (57:73); collar distinct; anterolateral angles carinate, rounded, produced anteriorly as far as collar; lateral notch sinuate; lateral borders of hind lobe parallel, converging anteriorly; hind border deeply sinuate medially. Fore disc with a thin median sulcus flanked by 4(2 + 2) crescent-shaped and S-shaped callosities; interlobal depression wide and shallow; hind disc transversely elevated, sloping forward and backward.

Scutellum long, as long as wide (42:42), flat; median carina thin; disc concentrically granulate at base, transversely rugose laterad of carina; lateral borders slightly sinuate, almost straight, carinate.

Hemelytra reaching 2/5 of tergum VII; apical angle of corium acute, apical border slightly sinuate, disc granulate.

Abdomen much longer than its maximum width across segment IV (127.5:78); lateral borders parallel, very finely crenulate; exterior borders of connexiva straight, those of VI and VII together forming an obtuse angle; PE-angles not protruding, PE-VII angularly rounded; paratergites very short, rounded; segment IX 1/2 as long as wide at base (9:18), slightly protruding medially. All spiracles ventral and not visible from above.

Legs. Unarmed.

Color: ferrugineous; venter and tarsi yellowish brown.

Total length: 9.06 mm; width of pronotum 2.92 mm; width of abdomen 3.12 mm.

Holotype ♀ (Bishop 8992), Malaya, Selangor, nr Kuala Lumpur, 9.IX.1958, J. L. Gressitt coll.

Mezira (Zemira) parallela n. sp. has a very distinctive parallel, narrow body, and can be easily separated from other species as indicated in the key.

Mezira (Zemira) membranacea (Fabricius), 1803, new combination Fig. 52–54.

Aradus membranaceus Fabricius, 1803, *Syst. Rhyng.*: 118.

Brachyrhynchus orientalis Amyot & Serville, 1843, *Hist. Nat. Ins.*: 305.

Brachyrhynchus membranaceus: Stål, 1868, *Hem. Fabr.*: 96.

Mezira membranacea: Kormilev, 1953, *Verh. Naturf. Ges., Basel* **64**(2): 339.

♀. Macropterous. Elongate ovate, with subparallel sides, slightly widening posteriorly; covered with setigerous granulation, setae short, fine and curled.

Head almost as long as width across eyes (16:17); anterior process slightly constricted at base, rounded and incised anteriorly, reaching almost to tip of antennal segment I; antenniferous tubercles strong, dentiform, slightly divergent, reaching basal 1/5 of antennal segment I. Eyes semiglobose, protruding. Postocular tubercles acute, very slightly produced beyond outer borders of eyes; infraocular carinae thin, moderately high, crenulate; vertex raised medially, granulate. Antennae moderately strong, relative length of antennal segments

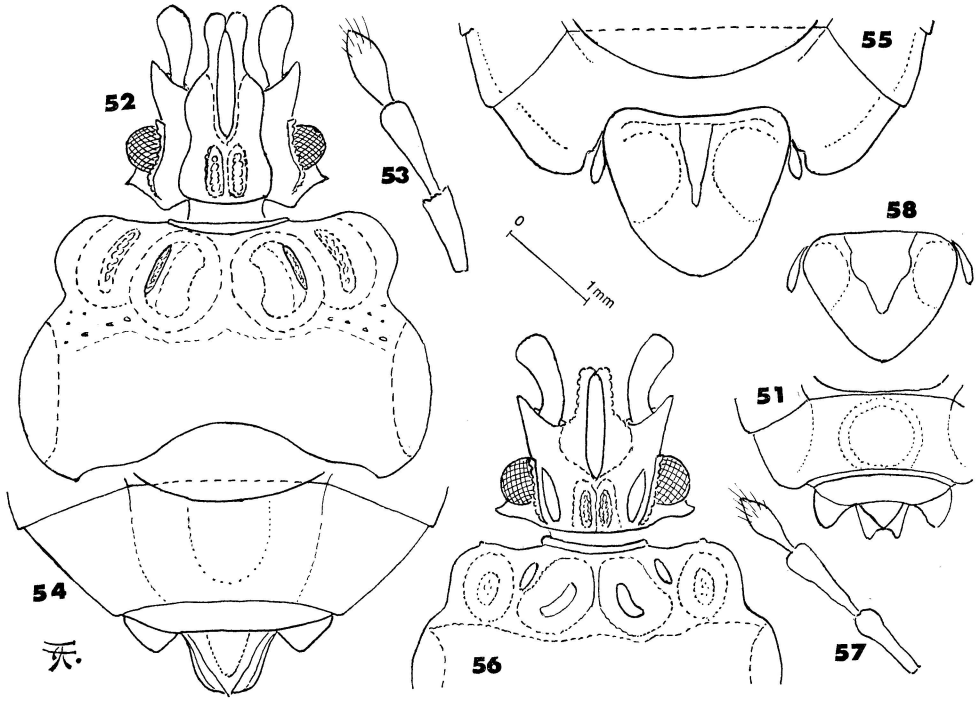


Fig. 51–58. 51, *Mezira rossi*, ♀, tip of abdomen from above; 52, *M. membranacea* (Fabricius), 1803, ♀, lectotype, head and pronotum, 53, same, antenna, 54, same, tip of abdomen; 55, *M. funebra* n. sp., ♂, tip of abdomen from above; 56, *M. breviceps* n. sp., ♂, head and pronotum; 57, same, antenna, 58, same, hypopygium and parameres.

I to IV: 7:8:8:7.5; labial atrium slit-like; labium reaching base of labial groove, which is open posteriorly.

Pronotum 1/2 as long as its maximum width (18:35); fore lobe narrower than hind lobe (29:35); collar distinct; anterolateral angles slightly expanded and rounded, almost reaching fore border of collar; interlobal depression deep, lateral notch forming an obtuse angle; lateral borders of hind lobe convex, rounded; hind border deeply sinuate medially. Fore disc with 4(2 + 2) moderately high, granulate ridges; hind disc granulate.

Scutellum shorter than its basal width (19:21); lateral borders straight and carinate, tip excavated; disc with somewhat blurred, cross-shaped median carina, granulate laterad of it.

Hemelytra reaching slightly over fore border of tergum VII; basolateral border of corium straight, carinate; apical angle acute, apical border slightly convex exteriorly, slightly sinuate interiorly.

Abdomen much longer than its maximum width across segment V (73:41); connexivum moderately wide, exterior borders of connexiva straight, PE-angles not protruding, PE-VII angularly rounded; discs of connexiva scabrous, covered with short, curled, yellow hairs. Tergum VII raised and slightly depressed in middle; paratergites short, angular, reaching basal 1/3 of segment IX, the latter rounded posteriorly, with a small tip medially. Spiracles II to VIII ventral, placed far from border, and not visible from above. Metathoracic scent-glands openings long and straight.

Legs. Trochanters free, femora fusiform, granulate, but not denticulate; tibiae slightly widening toward tips; claws without arolia.

Color: piceous, partially dark ferrugineous; membrane dark brown.

Total length: 10.9 mm; width of pronotum 3.50 mm; width of abdomen 4.10 mm.

Designated LECTOTYPE ♀, with the label "membranaceus" in the hand of Fabricius, from

the private collection of Fabricius (Kiel collection), now at the Universitetets Zoologiske Museum, Kopenhagen.

Mezira (**Zemira**) **funebra** Kormilev, new species Fig. 55.

♂. Macropterous. Elongate ovate, widening posteriorly (♂), or with subparallel sides (♀); with setigerous granulation, setae short, rusty, and curled.

Related to *Mezira* (*Zemira*) *membranacea* (F.), 1803, and previously identified as such, but larger, anterior process of head shorter, reaching 2/3 of antennal segment I; postocular tubercles acute, slightly produced beyond outer borders of eyes; labium reaching hind border of labial groove, which is open posteriorly. ♂, exterior border of connexivum VII slightly sinuate, then rounded and slightly reflexed; paratergites small, cylindrical, reaching basal 2/5 of hypopygium, the latter obovate, with a narrow, triangular, median ridge, reaching 3/5 of disc. ♀, exterior borders of connexivum VII straight, then a little convex, rounded; paratergites narrow, rounded, reaching basal 1/3 of segment IX, the latter rounded posteriorly. All spiracles ventral and not visible from above.

Measurements: head ♂ 42:45, ♀ 47:50; relative length of antennal segments I to IV: ♂ 20:25:24:23, ♀ 23:27:25:24; pronotum ♂ 48:105, ♀ 52:113; ratio width of fore lobe/width of hind lobe ♂ 78:105, ♀ 83:113; scutellum ♂ 57:60, ♀ 60:65; abdomen ♂ 167:120 across segment V, ♀ 170:124 across segment IV; hypopygium 38:43, segment IX (♀) 15:25.

Color: black; connexivum, labium, trochanters, and tarsi brown.

Total length: ♂ 12.24, ♀ 13.40 mm; width of pronotum ♂ 4.20, ♀ 4.52 mm; width of abdomen ♂ 4.80, ♀ 4.96 mm.

Holotype ♂ (Bishop 8993), NE New Guinea, Wau, Morobe District, 1250 m, 21.I.1963, J. Sedlacek coll.

Allotopotype ♀ (Bishop), same locality, 1300 m, 26–27.VII.1961, J. Sedlacek coll.

Paratypes 9 ♂♂ & 11 ♀♀, New Guinea (NE & W), Philippines Is. (Mountain Prov., Misamis, Camarines Sur, Mindanao).

M. funebra n. sp. is also distributed on Solomon Is. (Bougainville, Santa Isabel), Ceram, Celebes, and even on Borneo, whereas *M. membranacea* (F.), 1803, is distributed in India, Ceylon, Thailand, Laos, S. China (Hainan I.), Indonesia, Malaya, Marianas (Guam), and Bonin Is.

Mezira (**Zemira**) **micronesica** Esaki & Matsuda, new combination

Mezira micronesica Esaki & Matsuda, 1951, *Mushi* **22**(13): 77.

DISTRIBUTION: Micronesia, Samoa, New Hebrides, Fiji, New Caledonia, Solomon Is., Bismarck Arch.

In the collections of the Bishop Museum there are many specimens from Society Is., Samoa (Tafuna, Upolu, Tutuila, Manua), Marianas (Guam, Agrihan), Carolines (Ulithi Atoll, Ponape, Kusaie I., Truk, Yap), Bonin Is., Palau Is. (Garakayo, Koror, Babelthuap, Angaur, Peleliu), Gilbert Is. (Tarawa Atoll), Fiji (Moala I., Viti Levu), New Hebrides (Aoba), New Caledonia, Solomon Is. (Bougainville, New Georgia Group, Guadalcanal), Bismarck Arch. (New Britain, New Ireland) and Biak near New Guinea.

Mezira (**Zemira**) **subtriangula** Kormilev, new combination

Mezira subtriangula Kormilev, 1957, *Ann. Mag. Nat. Hist.* ser. 12, **10:** 269, f. 3–4.

DISTRIBUTION: Palau, New Guinea, Bismarck Arch., Solomon Is., New Hebrides.

In the collections of the Bishop Museum there are specimens from Palau Is. (Peleliu, Koror, Babelthuap), New Guinea (W, NE, Papua, Biak I.), Bismark Arch. (New Britain, New Ireland), Solomon Is. (Santa Isabel, Guadalcanal, Choiseul I., Bougainville, New Georgia Group), New Hebrides (Espiritu Santo).

Mezira (Zemira) solomonensis Kormilev, new species Fig. 47.

♂. Macropterous. Elongate ovate, slightly widening posteriorly in both sexes.

Closely related to *Mezira (Zemira) subtriangula* Kormilev, 1957, but not so broad posteriorly; exterior border of connexivum VII (♂) straight, PE-VII rounded; median ridge of hypopygium with parallel sides. Paratergites (♀) large, rounded posteriorly, reaching middle of segment IX.

Measurements: head ♂ 41:41, ♀ 45:45; relative length of antennal segments I to IV: ♂ 19:24:24:21, ♀ 19:20:19:20; pronotum ♂ 41: 94, ♀ 41:85; ratio width of fore lobe/width of hind lobe of pronotum: ♂ 67:94, ♀ 66:85; scutellum ♂ 50:52, ♀ 45:47; abdomen ♂ 140:104, ♀ 125:97; hypopygium 28:37; segment IX (♀) 9:20.

Color: black, sometimes dark ferrugineous; legs and antennae ferrugineous; labium and tarsi yellowish brown.

Total length: ♂ 11.16, ♀ 10.40 mm; width of pronotum ♂ 3.76, ♀ 3.40; width of abdomen ♂ 4.16, ♀ 3.88 mm.

Holotype ♂ (BISHOP 8994), Solomon Is., San Cristobal, Wugiroga, 8.VIII.1960, C. W. O'Brien coll.

Allotype ♀ (BISHOP), Solomon Is., San Cristobal, Kira Kira, 26.VIII.1960, C. W. O'Brien coll. Paratype 1 ♀ (BISHOP), Solomon Is., Santa Isabel, Tamatahi, 450 m, 2.VII.1960, C. W. O'Brien coll.

Mezira (Zemira) rossi Kormilev, new species Fig. 48–49, 51.

♂. Macropterous. Elongate ovate, widening backward; very finely granulate.

Head longer than width across eyes (♂ 35:33, ♀ 40:37); anterior process long, tapering, incised anteriorly, reaching 4/5 of antennal segment I; antenniferous tubercles blunt, with subparallel outer borders. Eyes semiglobose. Postocular tubercles dentiform, slightly produced beyond outer borders of eyes. Vertex very finely granulate. Antennae thin, relative length of antennal segments I to IV: ♂ 15:18:16:20, ♀ 15:19:16:23; labium produced beyond hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as its maximum width (♂ 29:68, ♀ 33:76); fore lobe narrower than hind lobe (♂ 53:68, ♀ 63:76); collar thin, sinuate anteriorly; anterolateral angles slightly expanded, rounded and produced forward as far as collar; lateral notch distinct, rounded; lateral borders of hind lobe convex, converging anteriorly; hind border deeply sinuate. Fore disc with 4(2 + 2) faint ridges; hind disc very finely granulate.

Scutellum shorter than its maximum width (♂ 35:40, ♀ 40:45); lateral borders very finely carinate; median carina thin, extending from basal 1/3 to tip of disc.

Hemelytra reaching middle of tergum VII (♂), or hind border of tergum VI (♀); apical angle of corium rounded, apical border slightly convex exteriorly and slightly sinuate interiorly.

Abdomen ovate, longer than its maximum width (♂ 98:82, ♀ 120:94) and widening posteriorly in both sexes. PE-angles II to V not protruding, VI protruding slightly and rounded, VII forming rounded lobes, which are reflexed (♂), or not (♀). Paratergites (♂) cylindrical, reaching 1/2 of hypopygium, the latter obovate (25:29). Paratergites (♀) large, rounded apically, reaching 3/4 of segment IX, which is cut out posteriorly. All spiracles ventral and not visible from above.

Legs. Unarmed.

Color: piceous; membrane black.

Total length: ♂ 7.18, ♀ 8.39 mm; width of pronotum ♂ 2.43, ♀ 2.71 mm; width of abdomen ♂ 2.93, ♀ 3.36 mm.

Holotype ♂ (California Academy of Sciences, San Francisco), NE New Guinea, Finschhafen, V.1944, E. S. Ross coll.

Allotopotype ♀ and 3 ♀♀ paratopotypes, collected with the holotype (California Academy of Sciences) and 1 paratype (BISHOP).

1♀, collected with this lot was somewhat aberrant in that segment IX was tricuspidate, not

incised posteriorly, and so was not made a paratype.

This curious species is dedicated to its collector, Dr E. S. Ross.

M. (Z.) rossi n. sp. is related to *M. subtriangula* Kormilev, 1957, but is smaller, labium is longer, paratergites (♀) much larger, and segment IX incised posteriorly; granulation very fine.

Mezira (Zemira) breviceps Kormilev, new species Fig. 56–58.

♂. Macropterous. Elongate ovate, widening posteriorly; pilosity very short and curled.

Related to *M. subtriangula* Kormilev, 1957, but PE-VI are protruding; exterior border of connexivum VII straight, then rounded, not reflexed (♂), and hypopygium different: obovate, with a short, subtriangular, median ridge, reaching 2/3 of disc; scutellum relatively very small. All spiracles ventral and not visible from above.

Anterior process of head with parallel sides, rounded and incised anteriorly, reaching 2/3 of antennal segment I; postocular tubercles slightly produced beyond outer borders of eyes; labium reaching hind border of labial groove, which is open posteriorly; PE-angles II to V slightly protruding, PE-VI more protruding, rounded.

Measurements: head 43:45, relative length of antennal segments I to IV: 20:20:23:19; pronotum 48:88, ratio width of fore lobe/width of hind lobe 70:88; scutellum 40:45; abdomen 118:100 across segment VI; hypopygium 31:40.

Color: black; labium, trochanters and tarsi brown.

Total length: 9.84 mm; width of pronotum 3.52 mm; width of abdomen 4.00 mm.

Holotype ♂ (BISHOP 9050), Thailand, Chiengmai, 1100–1500 m, 1966, J. & J. M. Sedlacek coll.

Mezira (Zemira) burmensis Kormilev, new species Fig. 50.

♂. Macropterous. Similar to *M. subtriangula* Kormilev, 1957, but body less dilated posteriorly; anterior process of head relatively shorter, reaching only to 2/3 of antennal segment I; exterior borders of connexivum VII (♂) less sinuate, and PE-VII less produced posteriorly, reaching only 1/2 of hypopygium; the latter with median ridge constricted at base, then widening, and tapering apically, reaching 4/5 of disc. Segment IX (♀) smaller and narrower, with oviduct more protruding (as in *M. membranacea* (F.), 1803).

Measurements: head ♂ 45:47, ♀ 45:46; relative length of antennal segments I to IV: ♂ 23:24:26:23, ♀ 24:25:22:22; pronotum ♂ 46:98, ♀ 45:98; ratio width of fore lobe/width of hind lobe ♂ 76:98, ♀ 83:98; scutellum ♂ 56:56, ♀ 58:57; abdomen ♂ 152:117 across segment VI, ♀ 195:112 across segment IV; hypopygium 28:38; segment IX (♀) 10:22.

All spiracles ventral and not visible from above.

Color: ferrugineous to dark ferrugineous, almost piceous; membrane black.

Total length: ♂ 10.82, ♀ 10.82 mm; width of pronotum ♂ 3.50, ♀ 3.50 mm; width of abdomen ♂ 4.18, ♀ 4.00 mm.

Holotype ♂ (Zoological Institute, Academy of Sciences, Leningrad), U. Burma, Myitkyina District, Namma, 15.X.1926, B. N. Chopra coll.

Allotopotype ♀, collected with holotype, in the same collection.

Paratopotype 1 ♂, collected with holotype (BISHOP).

Genus **Rossius** Usinger & Matsuda, 1959

Rossius polyacanthus (Walker), 1873

Crimia polyacantha Walker, 1873, *Cat. Hem. Het. Brit. Mus.* **7:** 17.

Barcinus polyacanthus: Distant, 1902, *Ann. Mag. Nat. Hist.* ser. 7, **9:** 359.

Rossius polyacanthus: Usinger & Matsuda, 1959, Class. Aradidae: 258, f. 75.

DISTRIBUTION: New Guinea.

This curious genus, with a single species, is known only from New Guinea, where it is widely

distributed. In the collections of the Bishop Museum there are a few specimens from West New Guinea, NE New Guinea and Papua.

Genus **Ctenoneurus** Bergroth, 1887

The genus *Ctenoneurus* Bergroth, 1887, is closely related to the genus *Neuroctenus* Fieber, 1861, which it replaces on the southern Pacific Islands and New Zealand, but in Australia, New Guinea, Indonesia and Central Africa both genera occur in the same areas. Generally, species of *Ctenoneurus* are more convex on the ventral side, have a longer labium, mostly produced beyond hind border of head, and the ♀♀ have the posterior border of sternum VI trisinuate (in *Neuroctenus* the central sinus is generally bilobate, forming a double arc), but in some species all these characters are less developed, and it is difficult to decide in which genus they should be placed. Not having opportunity to examine African species of *Ctenoneurus*, I am reluctant, at this time, to suppress *Ctenoneurus*.

The Oriental, Australian and southern Pacific species of *Ctenoneurus* Bergroth may be separated by the following key:

Key to species of *Ctenoneurus* Bergroth

1 (2). Venter with or without a weak carina on sterna IV–VI anteriorly; spiracles VI and VII sublateral and slightly visible from above. (New Guinea)..... **aberrans** Kormilev, 1967

Venter always with a distinct carina, or a row of tubercles, on sterna IV–VI anteriorly; spiracles VI ventral and not visible from above..... 2

2 (1). Head distinctly longer than wide across eyes..... 3

Head at most slightly longer than wide across eyes, mostly as long, or even shorter than wide..... 7

3 (2). Spiracles VII lateral, or sublateral, and visible from above. (Philippines)..... **longiceps***

Spiracles VII ventral and not visible from above..... 4

4 (3). Paratergites (♀) produced posteriorly as far as truncate segment IX; spiracles II to VII placed at about same distance from border. (Fiji)..... **zimmermani***

Paratergites (♀) produced far beyond small, apically notched, or tricuspidate, segment IX; spiracles II to VII placed in an arc, progressively more distant from border from III to VII..... 5

5 (4). Discs of connexiva and tergum VII very finely rugose and with a few small, dispersed granules; paratergites (♀) 1.5 as long as segment IX, the latter tricuspidate. (Solomon Is.)..... **solomonensis***

Discs of connexiva and tergum VII deeply depressed between rough rugae, or deeply punctured; paratergites (♀) at least 2 × as long as apically notched segment IX..... 6

6 (5). Larger species, ♀ over 8.0 mm; antennal segment IV 3 × as long as wide (15:5); anterolateral angles of pronotum slightly produced anteriorly beyond collar; rugae on terga VI and VII, and on connexiva VI and VII, forming closed cells. (Fiji)..... **major***

Smaller species, less than 6.5 mm; antennal segment IV only 2.5 × as long as wide (12.5:5); anterolateral angles of pronotum rounded, neither produced anteriorly, nor laterally; terga VI and VII, and connexiva VI and VII, deeply punctured, but without rows of closed cells. (Fiji)..... **punctiventris***

7 (2). Antennal segment III about as long as IV (8:8), or shorter (9:10)..... 8

Antennal segment III distinctly shorter than IV..... 13

8 (7). Head distinctly shorter than its width across eyes (26:28.5); antennal segments II–IV equal, or subequal in length. (New Caledonia)..... **lifuanus** (Montrouzier), 1861

*Described as new.

Head as long, or almost as long, as its width across eyes; antennal segment II shorter than III 9

9 (8). Smaller species, less than 4.5 mm; paratergites (♂) distinctly produced beyond hypopygium. (New Caledonia).....**cochereaui***

Larger species, over 4.5 mm; paratergites (♂) not reaching tip of hypopygium.....10

10 (9). Smaller species, less than 6.0 mm.....11

Larger species, over 7.0 mm.....12

11(10). Anterior process of head produced beyond tip of antennal segment I; anterolateral angles of pronotum evenly rounded, neither produced anteriorly nor laterally. (Philippines)... ..... **philippinensis***

Anterior process only reaching tip of antennal segment I; anterolateral angles of pronotum very slightly expanded laterally. (Borneo).....**borneensis***

12(10). Body slightly widening posteriorly in both sexes; pronotum with a deep, narrow, median sulcus on fore lobe; hypopygium twice (1 + 1) deeply depressed in middle at base. (New Guinea).....**halaszfyi** Kormilev, 1958

Body with parallel sides; pronotum with a blurred median sulcus on fore lobe; hypopygium barely depressed in middle at base. (New Guinea).....**lugubris***

13 (7). Head distinctly shorter than wide across eyes.....14

Head about as long as wide across eyes.....17

14(13). Smaller species, less than 5.5 mm; anterior process of head barely produced beyond tip of antennal segment I; antennal segment III half as long as IV (5:10). (New Guinea)... ..... **insignis***

Larger species, over 6.0 mm; anterior process distinctly produced beyond tip of antennal segment I; antennal segment III at least equal 2/3 of IV.....15

15(14). Smaller and narrower species, about 3.5 as long as wide. (Borneo).....**parallelus** (Walker), 1873

Larger and wider species, about 3 × as long as wide.....16

16(15). Spiracles VIII (♀) visible from above, tergum VI without median depression posteriorly. (New Zealand).....**pendergrasti***

Spiracles VIII (♀) not visible from above, tergum VI with a median depression posteriorly. (New Zealand).....**myersi** Kormilev, 1953

17(13). Spiracles II–VII in an arc, spiracles III to VII progressively more distant from border.....18

Spiracles III–VII placed at about same distance from border.....19

18(17). Larger species, over 5.5 mm pronotum truncate anteriorly, anterolateral angles neither produced anteriorly, nor laterally; paratergites (♂) slightly produced beyond hypopygium, the latter as long as wide (15:15). (New Caledonia).....**hammaensis***

Smaller species, less than 4.5 mm; anterolateral angles of pronotum produced anteriorly beyond collar; paratergites (♂) slightly shorter than hypopygium, the latter shorter than wide (12:14). (Samoa).....**samoaensis***

19(17). Labium long, produced beyond fore border of prosternum.....20

Labium short, at most reaching fore border of prosternum.....22

20(19). Exterior borders of connexiva VI–VII, and posterior border of hypopygium, very scabrous, roughly granulate. (New Hebrides).....**minutus** Kormilev, 1967

Exterior borders of connexiva VI–VII, and hind border of hypopygium normal, finely granulate 21

21(20). PE-VII angles (♂) rounded, paratergites reaching to 3/4 of hypopygium, the latter more rounded posteriorly, its maximum width across middle of disc; anterolateral angles of pronotum rounded. (Solomon Is., Rennell I.).....**wolffi** Kormilev, 1969

PE-VII angles angular with blunt tips (♂); paratergites almost reaching tip of hypopygium, the latter more attenuated posteriorly, its maximum width at about basal 1/3 of disc; anterolateral angles of pronotum slightly, angularly produced forward

(Fiji) ..... **fijiensis***

22(19). Larger species, over 7.5 mm; antennal segments III and IV subequal in length (15:15.5). (New Zealand)..... **hochstetteri** (Mayr), 1866

Smaller species, less than 6.5 mm; antennal segment III always shorter than IV (at least 14:15) 23

23(22). Antennal segment II subequal in length to III..... 24

Antennal segment II distinctly shorter than III (10:13)..... 27

24(23). Connexivum with sharp granules and spicules arranged in rows on and along outer borders; connexivum and tergum VII sometimes roughly and deeply punctured, looking rugged; hypopygium with dispersed, sharp granules or spicules..... 25

Connexivum, tergum VII, and hypopygium with dispersed round granules, but without rough punctures, or spicules..... 26

25(24). Connexivum and hypopygium with spiculoid, sharp granules, but without rough punctures. (New Guinea)..... **spiculifer***

Connexivum and tergum VII with small, sharp granules, and with deep and rough punctures. (Fiji, New Hebrides)..... **bergrothianus** Kirkaldy, 1908

26(24). Granulation of body fine and sparse; narrower species, ratio length/width (♀) 3.33:1. (New Caledonia)..... **coghiensis***

Granulation larger and denser; wider species, ratio length/width 3.12:1. (New Caledonia)..... **simulans***

27(23). Narrower species, ratio length/width about 3:1. (Australia (Qsld.))... **australis** Kormilev, 1965

Wider species, ratio length/width about 2.5:1. (New Guinea)..... **prominens***

Ctenoneurus longiceps Kormilev, new species

♀. Macropterous. Elongate with parallel sides; head, pronotum and scutellum roughly granulate; corium and connexivum with sparse, fine granulation.

Head longer than its width across eyes (31:27); anterior process stout, very long, slightly constricted laterally and incised anteriorly, slightly produced beyond tip of antennal segment I. Antenniferous tubercles stout, blunt, exteriorly serrate and slightly diverging. Eyes moderately large, semiglobose. Postocular tubercles minute, acute, not reaching outer borders of eyes. Vertex convex, roughly granulate, narrowly depressed mesad of eyes (infraocular callosities). Antennae robust, segments I to III strongly dilated toward apex, IV fusiform; relative length of antennal segments I to IV: 11:9:10.5:12. Labium slightly produced beyond hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as its maximum width (26:57); fore lobe narrower than hind lobe (42:57). Collar distinct; anterolateral angles rounded and finely crenulate; lateral notch sinuate, interlobal depression deep and narrow, evanescent laterally; lateral borders of hind lobe parallel, converging anteriorly; hind border slightly sinuate. Fore disc convex, with semiobliterated median sulcus and 4(2 + 2) obliterated ridges; fore and hind discs densely granulate.

Scutellum shorter than its basal width (30:38); lateral borders carinate, straight, slightly sinuate before tip; apex angular, forming an obtuse angle with sharp tip.

Hemelytra reaching hind border of tergum VI; apical angle of corium acute, apical border straight, sinuate interiorly.

Abdomen longer than its maximum width across segment IV (80:61); lateral borders parallel from segment II to VI, then converging; connexiva II and III fused; PE-III to VI barely protruding; PE-VII truncate posteriorly, forming an obtuse angle with exterior border of connexivum VII. Paratergites short, rounded, almost reaching tip of segment IX, which is subtruncate, oviduct slightly protruding. Spiracles II to VI ventral, placed far from border; VII lateral and visible from above, VIII terminal. Venter convex; posterior border of sternum VI widely sinuate medially.

Color: ferrugineous; membrane brown, whitish at base; labium and tarsi yellowish brown.

Total length: 6.32 mm; width of pronotum 2.28 mm; width of abdomen 2.44 mm.

Holotype ♀ (BISHOP 8995), Philippines Is., Misamis Or., Mt Kibungol, 20 km SE of Gingoog, 700–800 m, 9–18.IV.1960, H. Torrevillas coll.

Ctenoneurus zimmermani Kormilev, new species Fig. 59–60.

♂. Macropterous. Elongate with subparallel sides, slightly widening backward; connexivum, tergum VII and hypopygium very scabrous, roughly punctured.

Head slightly longer than its width across eyes (♂ 27:25.5, ♀ 28:26.5); anterior process long, slightly tapering, notched apically, reaching 2/3 of antennal segment I; antenniferous tubercles acute, with parallel borders. Eyes semiglobose, protruding. Postocular borders angularly rounded; vertex punctured. Antennae strong, but short; relative length of antennal segments I to IV: ♂ 8:8:8:12, ♀ 8:9:9:13. Labium produced beyond fore border of prosternum.

Pronotum 1/2 as long as its maximum width (♂ 25:50, ♀ 26:52); fore lobe narrower than hind lobe (♂ 45:50, ♀ 47:52). Collar very thin; anterolateral angles produced anteriorly beyond collar and rounded; lateral borders convex, strongly convergent anteriorly; hind border slightly sinuate, almost straight. Fore disc depressed medially and with 2(1 + 1) larger, and laterad of them with 2(1 + 1) smaller, crescent-shaped callosities; hind disc densely granulate.

Scutellum shorter than its basal width (♂ 22:29, ♀ 23:30); all borders finely carinate, lateral borders sinuate medially, tip angularly rounded. Disc scabrous, deeply punctured and with a few dispersed granules; median carina T-shaped, slightly blurred.

Hemelytra reaching 3/4 of tergum VII (♂), or 3/4 of tergum VI (♀); apical angle of corium rounded; apical border convex exteriorly, sinuate interiorly.

Abdomen longer than its maximum width across segment V (♂ 81:54, ♀ 87:57). Lateral borders divergent from II to V in both sexes, then converging, rounded. Connexivum narrow; PE-angles not protruding, PE-VII forming an acute (♂), or blunt (♀) angle with rounded tip. Paratergites (♂) cylindrical, reaching 2/3 of subcordate hypopygium, which is as long as wide (19:19), deeply depressed medially on basal 2/3 of disc. Paratergites (♀) slightly divergent and rounded, produced beyond small, rounded segment IX. Spiracles II ventral, III to VII also ventral, but placed close to border, VIII terminal.

Color: dark brown; antennae, wide band along hind border of pronotum, clavus, exterior borders of connexiva, coxae, trochanters and apices of femora and tibiae brown; labium and tarsi ochraceous; membrane dark brown, whitish along base.

Total length: ♂ 5.57, ♀ 5.86 mm; width of pronotum ♂ 1.78, ♀ 1.86 mm; width of abdomen ♂ 1.93, ♀ 2.03 mm.

Holotype ♂ (BISHOP 8996), Fiji, Viti Levu, Belt Road, 67–70 km (42–44 mi.) W of Suva, 90 m (300′), 23.VIII.1938, E. C. Zimmerman coll., (beating shrubs).

Allotopotype ♀ (BISHOP), same locality, 26–29 km (16–18 mi.) W of Suva, 22.VII.1938, E. C. Zimmerman, (beating shrubs).

Paratypes: 4 ♂♂ & 1 ♀, Fiji, Viti Levu, Belt Road, Nandarivatu & Tholo-i-Suva, 22–29.VII & 5.IX.1938, E. C. Zimmerman coll.; 4 ♂♂ & 1 ♀, Fiji, Viti Levu, Tholo-i-Suva & Lami, II–V.1951, N.L.H. Krauss coll. (BISHOP).

It is a pleasure to dedicate this species to Dr E. C. Zimmerman who collected it.

Ctenoneurus zimmermani n. sp. is related to *C. lifuanus* (Montrouzier) from New Caledonia, but is narrower, hypopygium as long as wide, and with a narrow depression medially.

Ctenoneurus solomonensis Kormilev, new species Fig. 61–62.

♂. Macropterous. Related to *C. zimmermani* n. sp., but longer and more attenuated at the fore 1/2 of abdomen; head, pronotum, scutellum and corium granulate; outer borders of connexiva with a double row of granules; discs of connexiva and tergum VII scabrous and with a few fine granules. Body covered with sparse, short, erect bristles, easily abraded. Anterior process of head produced beyond tip of antennal segment I, antenniferous tubercles acute, with parallel outer borders; postocular tubercles angularly rounded; vertex granulate. Labium produced beyond fore border of prosternum. Fore lobe of pronotum widely depressed

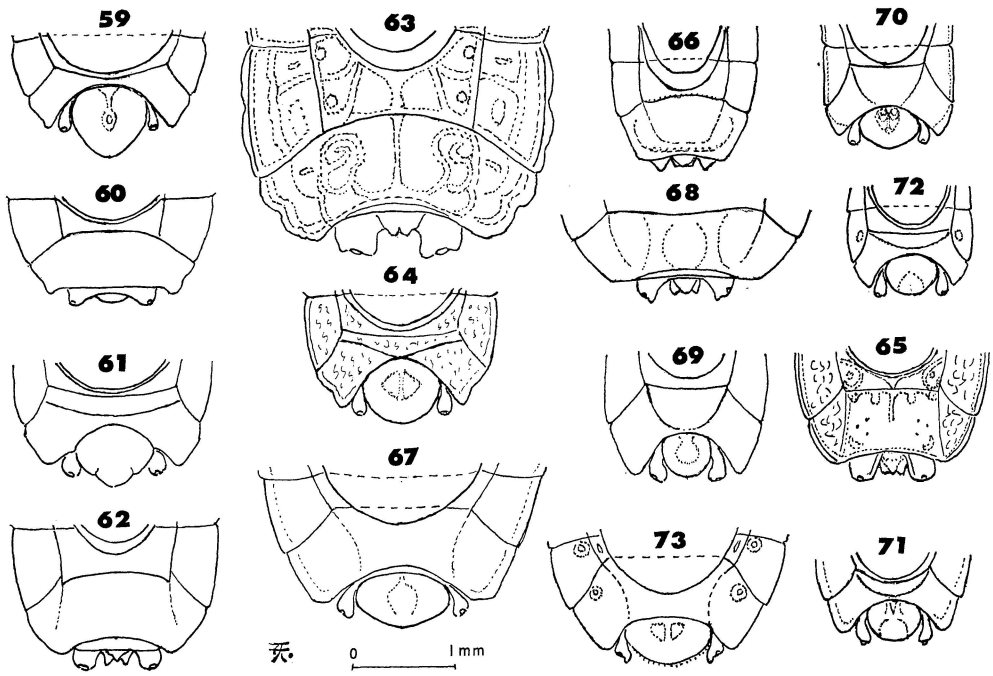


Fig. 59–73. 59, *Ctenoneurus zimmermani* n. sp., ♂, tip of abdomen from above; 60, same, ♀, tip of abdomen from above; 61, *C. solomonensis* n. sp., ♂, tip of abdomen from above; 62, same, ♀, tip of abdomen from above; 63, *C. major* n. sp., ♀, tip of abdomen from above; 64, *C. punctiventris* n. sp., ♂, tip of abdomen from above; 65, same, ♀, tip of abdomen from above; 66, *C. cochereaui* n. sp., ♀, tip of abdomen from above; 67, *C. lugubris* n. sp., ♂, tip of abdomen from above; 68, same, ♀, tip of abdomen from above; 69, *C. hammaensis* n. sp., ♂, tip of abdomen from above; 70, *C. fijiensis* n. sp., ♂, tip of abdomen from above; 71, *C. coghiensis* n. sp., ♂, tip of abdomen from above; 72, *C. samoaensis* n. sp., ♂, tip of abdomen from above; 73, *C. prominens* n. sp., ♂, tip of abdomen from above.

medially; interlobal depression semicircular, weak and wide. Hemelytra reaching hind border of tergum VI (♂), or middle of tergum VI (♀); posterior border of corium deeply sinuate interiorly, weakly exteriorly. Connexiva II and III completely fused together; PE-angles not protruding, but incisures between segments deeper. Tergum VII (♂) very short, slightly curved, almost separated from hypopygium by connexiva VII produced mesad. Hypopygium without depression at base; paratergites (♂) large, rounded posteriorly, reaching 3/4 of hypopygium; paratergites (♀) large, rounded posteriorly, produced beyond small, incised posteriorly segment IX. Spiracles II to VII ventral, placed in an arc, VIII terminal.

Measurements: head ♂ 29:25, ♀ 31:28; relative length of antennal segments I to IV: ♂ 9:8:7:12, ♀ 9:8:7.5:12; pronotum ♂ 26:48, ♀ 27:53; ratio width of fore lobe/width of hind lobe ♂ 42:48, ♀ 45:53; scutellum ♂ 25:29, ♀ 27:33; abdomen ♂ 93:52 across segment VI, ♀ 107:55 across segment V; hypopygium 18:20.

Color: piceous; clypeus, base of antennal segments I to III, and apical 1/2 of IV, hind lobe of pronotum, femora and tibiae sometimes dark brown; base of membrane white, disc black; labium and tarsi yellowish brown.

Total length: ♂ 6.07, ♀ 7.36 mm; width of pronotum ♂ 1.71, ♀ 1.89 mm; width of abdomen ♂ 1.86, ♀ 1.96 mm.

Holotype ♂ (Bishop 8997), Solomon Is., Bougainville, Boku, 5.VI.1956, J. L. Gressitt coll.

Allotype ♀ (BISHOP), Solomon Is., Vella Lavella, Ulo Crater, 10 m, XII.1963, J. L. Gressitt coll., (Malaise trap). Paratypes: 1 ♀, Solomon Is., Bougainville, Kokure, 690 m, 12.VI.1956, B. J. Ford, Jr. coll.; 1 ♂, Solomon Is., New Georgia Group, Kolombangara, Iriri, 5 m, 2.VII.1964, J. & M. Sedlacek coll. (BISHOP).

Ctenoneurus major Kormilev, new species Fig. 63.

♀. Macropterous. Closely related to *C. solomonensis* n. sp., but much larger; granulation of head and pronotum somewhat indistinct, but the granulation of exterior borders of connexiva much rougher, and the inner row receding on connexiva VI and VII. Labium produced beyond fore border of prosternum. Hemelytra reaching middle of tergum VI, the rest of terga VI and VII strongly carinate, carinae forming walls of deeply depressed cells; connexiva with similar carinae and deep depressions. Exterior borders of abdomen festooned on VI and VII. Paratergites very large, subrectangular, with rounded angles, produced far beyond small, subtriangular segment IX. Spiracles placed in an arc: spiracles VII are 6 × as distant from border as spiracles III. Sterna smooth in middle and with semiobliterated rugae and granules laterally; genital plates I (first gonocoxopodites) obliquely rugose.

Measurements: head 38:35, relative length of antennal segments I to IV: 11:11:10:15; pronotum 40:70; ratio width of fore lobe/width of hind lobe 63:70; scutellum 35:41; abdomen 135:81.

Color: reddish brown; tergum piceous; membrane brown; venter ferrugineous; labium and tarsi yellowish brown.

Total length: 8.75 mm; width of pronotum 2.50 mm; width of abdomen 2.90 mm.

Holotype ♀ (BISHOP 8998), Fiji, Viti Levu, Tholo-i-Suva, 600′, 25.VII.1938, E. C. Zimmerman coll. (beating).

Ctenoneurus punctiventris Kormilev, new species Fig. 64–65.

♂. Macropterous. Also closely related to *C. solomonensis* n. sp., of the same size and shape, but with disc of hypopygium twice depressed (1 + 1); tergum VII (♂) in the form of a very short and broad pentagon, separated from hypopygium by connexiva VII. Punctures on connexiva IV to VII and terga VI and VII, very deep, large, irregularly shaped, but they do not form closed cells as in *C. major* n. sp. Head, pronotum and scutellum densely granulate. Anterior process of the head produced beyond tip of antennal segment I; labium produced beyond fore border of prosternum. Spiracles placed in an arc, spiracles VII 4 × more distant from border than III. Paratergites (♂) large, cylindrical, almost reaching tip of hypopygium; paratergites (♀) also large, rounded posteriorly, produced far beyond tip of segment IX.

Measurements: head ♂ 30:27.5, ♀ 31:28; relative length of antennal segments I to IV: ♂ 7.5:7.5:7.5:12.5, ♀ 8:7.5:8:13; pronotum ♂ 24:47, ♀ 27.5:50; ratio width of fore lobe/width of hind lobe ♂ 43:47, ♀ 45:50; scutellum ♂ 23:28, ♀ 26:30; abdomen ♂ 91:52, ♀ 95:53 both across segment VI; hypopygium 17:21.

Color: reddish brown, partially piceous; membrane black, white at base; labium and tarsi yellowish brown.

Total length: ♂ 6.14, ♀ 6.50 mm; width of pronotum ♂ 1.68, ♀ 1.79 mm; width of abdomen ♂ 1.86, ♀ 1.89 mm.

Holotype ♂ (BISHOP 8999), Fiji, Viti Levu, Belt Road, 67–70 km (42–44 mi.) W of Suva, 23.VII.1938, E. C. Zimmerman coll., (beating shrubs).

Allotype ♀ (BISHOP), Fiji, Viti Levu, Road W of Nandarivatu, 11.IX.1938, E. C. Zimmerman coll., (beating shrubs).

Paratypes (BISHOP), 4 ♂♂ & 1 ♀, Fiji, Viti Levu, Belt Road, Tholo-i-Suva, Nandarivatu, 22–25.VII.1938, E. C. Zimmerman coll.; 4 ♂♂ & 1 ♀, Fiji, Viti Levu, Lami-Tholo-i-Suva, II–IV. 1951, N. L. H. Krauss coll.; 1 ♀, Fiji, Viti Levu, 26–29 km (16–18 mi.) W of Suva, 22.VII.1938, E. C. Zimmerman coll.; 5 nymphs from Wainiloka and Tholo-i-Suva.

One ♀, paratype, was much larger, 7.18 mm, and another (♀) smaller, only 5.82 mm.

Ctenoneurus lifuanus (Montrouzier), 1861

Mezira lifuana Montrouzier, 1861, *Ann. Soc. Ent. Fr.* ser. 4, **1:** 69.

Ctenoneurus lifuanus: Bergroth, 1887, *Oef. Fin. Vet.-Ak. Foerh.* **29:** 188.

DISTRIBUTION: New Caledonia.

This species is common in New Caledonia. In the collections of the Bishop Museum there are specimens from various parts of the island.

Ctenoneurus cochereaui Kormilev, new species Fig. 66.

♀. Macropterous. Elongate with subparallel sides.

Head slightly shorter than width across eyes (♀ 19:20.5, ♂ 18:20); anterior process robust, with parallel sides, genae continguous in front of clypeus, reaching slightly beyond tip of antennal segment I; antenniferous tubercles small, acute, with parallel outer borders. Eyes semiglobose, protruding. Postocular tubercles minute, acute, not reaching outer border of eyes. Vertex flat, with dispersed, fine granulation. Antennae moderately robust, relative length of antennal segments I to IV: ♀ 6:5:–:– (III and IV missing), ♂ 7:6.5:7.5:9; labium reaching hind border of labial groove.

Pronotum 1/2 as long as its maximum width (♀ 17:36, ♂ 17.5:36); collar thin; anterolateral angles angularly rounded, forming a slightly obtuse angle; lateral notch absent; lateral borders subparallel, slightly convex at humeri; slightly reflexed, converging and straight anteriorly; hind border widely sinuate. Disc slightly convex, finely granulate and transversely depressed in middle.

Scutellum as long as wide at base (♀ 21:21, ♂ 21:21); lateral borders carinate, sinuate at basal 1/2, slightly convex at apical; tip narrowly rounded.

Hemelytra reaching 1/2 of tergum VI (♀), or hind border of tergum VI (♂); apical angle of corium rounded, apical border convex.

Abdomen longer than its maximum width (62:37 across segment V (♀), or 60:40 across segment IV (♂)). Lateral borders slightly sinuate on basal 1/2, slightly convex on apical. Connexivum narrow and slightly reflexed exteriorly; connexiva II and III fused; PE-angles not protruding, PE-VII forming an obtuse angle; paratergites (♀) moderately large, angular, produced as far as truncate segment IX; paratergites (♂) slightly produced beyond hypopygium, the latter shorter than its width at base (8.5:15), depressed on disc anteriorly, rounded posteriorly, with spiculoid granulation.

Color: dark brown; corium golden brown, veins of corium and connexivum reddish brown; membrane brown, with darker veins and paler base. Labium, acetabulae, pro-, meso-, and metasternum, ovate callosities and round callous spots on sterna reddish brown; hind borders of sterna III to V are whitish.

Total length: ♀ 4.32, ♂ 4.54 mm; width of pronotum ♀ 1.20, ♂ 1.20 mm; width of abdomen ♀ 1.23, ♂ 1.43 mm.

Holotype ♀ (Centre O.R.S.T.O.M., Noumea, New Caledonia), New Caledonia, Coulée Boulari, Mont Doré; Delaney coll.

Allotype ♂ (BISHOP 9044), New Caledonia, 10 km S of Koh, 300 m, 31.I.1963, G. Kuschel coll.

It is a pleasure to dedicate this species to Dr Paul Cochereau, of the ORSTOM, Noumea, by whose kind offices I had the opportunity to examine Aradidae from their collections.

C. cochereaui n. sp. is related to *C. minutus* Kormilev, 1967, from New Hebrides, but has a shorter head, the anterior process is only slightly produced beyond tip of antennal segment I, the labium is slightly shorter and the scutellum is much longer.

Ctenoneurus halaszfyi Kormilev

Ctenoneurus halaszfyi Kormilev, 1958, *J. N. Y. Ent. Soc.* **66:** 92.

DISTRIBUTION: New Guinea.

In the collections of the Bishop Museum there are a few specimens from New Guinea and Bismark Arch. (New Britain).

Ctenoneurus lugubris Kormilev, new species Fig. 67–68.

♂. Macropterous. Closely related to *C. halaszfyi* Kormilev, 1958, but slightly smaller, median sulcus

on the fore lobe of pronotum generally semiobliterated; hypopygium (♂) with a weak, double (1 + 1) depression on disc near base. Males may be easily separated by hypopygium, ♀♀ not so easily, particularly as they are distributed in the same areas, but the character of deep median sulcus on pronotum (*C. halaszfyi*), or obliterated (*C. lugubris*), may help. Labium reaching fore border of prosternum; spiracles II to VII ventral, VIII lateral.

Measurements: head ♂ 34:33, ♀ 36:34; relative length of antennal segments I to IV: ♂ 10:12:–:– (segments III and IV missing), ♀ 11:11:14:14; pronotum ♂ 32:65, ♀ 33:70; ratio width of fore lobe/width of hind lobe: ♂ 53:65, ♀ 64:70; scutellum ♂ 35:40, ♀ 37:42; abdomen ♂ 102:75 across segment V, ♀ 112:78 across segment IV; hypopygium 14:26.

Color: piceous; ventral side mostly dark ferrugineous; labium and tarsi yellowish brown.

Total length: ♂ 7.32, ♀ 7.93 mm; width of pronotum ♂ 2.32, ♀ 2.50 mm; width of abdomen ♂ 2.68, ♀ 2.78 mm.

Holotype ♂ (BISHOP 9000), NE New Guinea, Busu R., E of Lae, 100 m, 15.IX.1955, J. L. Gressitt coll.

Allotype ♀ (BISHOP), NE New Guinea, Garaina, 50 m, 16.I.1968, J. Sedlacek coll.

Paratypes: 1 ♂ & 1 ♀, NE New Guinea, Wau, Morobe Distr., 1150–1500 m, 24.IX.1961 & 7.XI.1961, J. & J. M. Sedlacek coll.; 1 ♀, NE, 32 km SW of Lae, 100 m, 23.III.1963, J. Sedlacek coll.; 1 ♀, Papua, Kokoda-Pitoki, 450 m, 24.III.1956, J. L. Gressitt coll.; 1 ♂, NE, Wau, Nakata Ridge, 1500 m, 19.VIII.1963, P. Shanahan coll.; 2 ♂♂, NE, Kakalo, 750 m, 20–30.VIII.1966, O. R. Wilkes & G. A. Samuelson coll.

Ctenoneurus insignis Kormilev, new species

♀. Macropterous. Related to *C. lifuanus* (Montrouzier), 1861, but smaller, antennae relatively shorter, only slightly longer than head width across eyes (26:24); anterolateral angles of pronotum more rounded, neither produced anteriorly, nor laterally; lateral borders of pronotum straight on basal 1/2, sinuate on apical 1/2, their carinate borders not reaching tip of scutellum, leaving it open. Hemelytra longer, reaching 3/4 of tergum VI.

Anterior process slightly produced beyond tip of antennal segment I; postocular tubercles small, acute, not reaching outer border of eyes; fore lobe of pronotum rather convex, with 4(2 + 2) obliterated ridges; PE-angles not protruding; PE-VII angular, reaching base of paratergites; the latter obliquely truncate, very slightly produced beyond incised segment IX. Spiracles II to VII ventral, VIII lateral.

Measurements: head 22:24; relative length of antennal segments I to IV: 6.5:6:5.5:10; pronotum 25:44; ratio width of fore lobe/width of hind lobe 38:44; scutellum 24:25; abdomen 75:48 across segment V.

Color: head, fore lobe of pronotum, and base of scutellum piceous; labium, antennae, hind lobe of pronotum, rest of scutellum, corium, connexivum, most of ventral side, and most of legs ferrugineous; membrane blackish, widely whitish at base; tarsi yellowish brown.

Total length: 5.07 mm; width of pronotum 1.57 mm; width of abdomen 1.71 mm.

Holotype ♀ (BISHOP 9001), SE New Guinea, Mt Lamington, 22.III.1952, W. W. Brandt coll.

Ctenoneurus philippinensis Kormilev, new species

♂. Macropterous. Elongate, sides parallel. Head, pronotum and scutellum granulate; corium with semiobliterated granulation; connexivum finely scabrous.

Head slightly shorter than width across eyes (20:21); anterior process robust, with parallel sides, rounded and incised anteriorly, produced beyond tip of antennal segment I; antenniferous tubercles small, acute, with exterior borders parallel; postocular tiny, acute, almost reaching outer borders of eyes. Eyes semiglobose. Vertex granulate, infraocular depressions narrow. Antennae moderately strong, relative length of antennal segments I to IV: 7:7:8:9; labium long, reaching fore border of prosternum.

Pronotum less than 1/2 as long as maximum width (17:42); ratio width of fore lobe/width of hind lobe 33:42. Collar thin; anterolateral angles rounded, neither produced anteriorly, nor laterally; lateral notch slightly sinuate; lateral borders of hind lobe subparallel, slightly convex, strongly converging anteriorly;

hind border almost straight. Fore disc with 4(2 + 2) low, granulate, somewhat obliterated ridges; hind disc granulate; interlobal depression thin.

Scutellum shorter than its basal width (18:25); lateral borders carinate, sinuate in middle, convex near tip; the latter forming a right angle.

Hemelytra reaching basal 1/3 of tergum VII; apical angle of corium acute, apical border sinuate interiorly.

Abdomen longer than its width across segment V (56:44); lateral borders subparallel, very slightly widening posteriorly; PE-angles II to V slightly protruding, PE-VI more protruding, PE-VII produced as small, rounded lobes. Paratergites small, subcylindrical, obliquely truncate apically, reaching 2/3 of hypopygium, the latter shorter than wide (10:15), rounded posteriorly and with a triangular depression at base. Spiracles II to VI ventral, VII and VIII lateral.

Color: dark brown; membrane black, whitish at base.

Total length: 4.64 mm; width of pronotum 1.68 mm; width of abdomen 1.76 mm.

Holotype ♂ (BISHOP 9002), Philippines Is., Mt Makiling, 1500 m (500′), Luzon, 6.IV.1932, F. C. Hadden coll.

Ctenoneurus borneensis Kormilev, new species

♀. Macropterous. Elongate with subparallel sides, very slightly widening posteriorly; head and pronotum very finely granulate; connexivum finely punctured.

Head as long as width across eyes (24:24); anterior process robust, with parallel sides, rounded anteriorly and incised, reaching tip of antennal segment I; antenniferous tubercles stout, blunt, with parallel outer borders. Eyes semiglobose, protruding. Postocular tubercles tiny, not reaching outer borders of eyes. Vertex very finely granulate. Antennae robust, with segments strongly dilated toward tips; relative length of antennal segments I to IV: 9:8:9:10. Labium long, produced beyond fore border of prosternum.

Pronotum shorter than its maximum width (21:43); fore lobe narrower than hind lobe (35:43); anterolateral angles rounded and slightly carinate, neither produced anteriorly, nor laterally; lateral borders of hind lobe parallel, converging anteriorly; lateral notch sinuate; interlobal depression wide and moderately deep. Fore disc with 4(2 + 2) semiobliterated ridges, hind disc very finely granulate.

Scutellum shorter than its basal width (22:27); lateral borders carinate, straight, tip rounded; median carina extending from basal 1/3 to tip, laterad of it disc is transversely rugose; basal 1/3 of disc longitudinally rugose.

Hemelytra reaching slightly beyond fore border of tergum VII; apical angle of corium blunt, apical border twice sinuate.

Abdomen longer than its width across segment IV (65:50); lateral borders parallel, PE-angles not protruding, PE-VII rounded. Spiracles large, II to VI ventral, placed far from border, VII and VIII lateral and visible from above. Venter convex, hind border of sternum VI widely sinuate medially. Paratergites rounded and produced as far as subtruncate segment IX.

Color: ferrugineous, partially darker; membrane dark brown, light brown at base.

Total length: 5.28 mm; width of pronotum 1.72 mm; width of abdomen 2.00 mm.

Holotype ♀ (BISHOP 9003), Sabah N. Borneo, Gomantong Caves, 22–26.XI.1958, T. C. Maa coll.

Ctenoneurus parallelus (Walker), 1873, new combination

Crimia parallela Walker, 1873, *Cat. Hem. Het. Brit. Mus.* **7:** 19.

Neuroctenus parallelus: Lethierry & Severin, 1896, *Cat. Gén. Hém.* **3:** 45.

By the kind offices of Mrs G. M. Black of the British Museum (N. H.), I examined a specimen of this species (cotype of Walker) and I see that it belongs to *Ctenoneurus* rather than to *Neuroctenus*.

♂. Macropterous. Elongate with parallel sides; head, pronotum and scutellum finely granulate; connexivum, tergum VII and hypopygium punctured.

Head slightly shorter than width across eyes (28:30); anterior process robust, slightly constricted laterally, rounded and incised apically, produced beyond tip of antennal segment I; antenniferous tubercles acute,

divergent. Eyes large, semiglobose. Postocular tubercles spiniform, produced as far as eyes. Vertex roughly granulate. Antennae robust, segments dilated toward apex, relative length of antennal segments I to IV: 10:6:7.5:12. Labium reaching base of labial groove.

Pronotum shorter than its maximum width (28:45), fore lobe narrower than hind lobe (40:45); anterolateral angles rounded, slightly expanded and crenulate; lateral borders almost straight, slightly reflexed medially and finely crenulate; hind border evenly sinuate. Fore disc with 4(2 + 2) granulate ridges, hind disc roughly granulate.

Scutellum as long as its width at base (27:27); lateral borders carinate, tip rounded and excavated; disc roughly granulate, median carina thin.

Hemelytra reaching basal 1/3 of tergum VII; apical angle of corium acute, apical border twice sinuate, interior sinus deeper.

Abdomen longer than its width across segment V (95:50); connexiva II and III fused, PE-angles not protruding; paratergites very small, truncate posteriorly, reaching 1/2 of hypopygium; the latter large, cordate, broadly rounded posteriorly, slightly depressed on disc, shorter than wide (14:20). Spiracles II to VII ventral, VIII terminal.

Color: ferrugineous; membrane blackish, white at base; labium and tarsi yellow.

LECTOTYPE ♂ (British Museum, N. H., London), Borneo, (Sarawak), with label, probably by Distant: "Neuroctenus parallelus Walker."

Ctenoneurus myersi Kormilev, 1953

Ctenoneurus myersi Kormilev, 1953, *Verh. Naturf. Ges., Basel* **64:** 344.

DISTRIBUTION: New Zealand.

In the collections of the Bishop Museum there is one specimen from New Zealand.

Ctenoneurus pendergrasti Kormilev, new species

♀. Macropterous. Elongate with parallel sides, densely granulate.

Head shorter than width across eyes (27.5:31); anterior process robust, tapering in convex line, incised anteriorly, produced far beyond tip of antennal segment I; antenniferous tubercles short, acute, with subparallel outer borders. Eyes semiglobose, moderately large. Postocular tubercles small, blunt, by far not reaching outer borders of eyes. Vertex densely granulate. Antennae slender, relative length of antennal segments I to IV: 8:9:10:14. Labium produced far beyond fore border of prosternum.

Pronotum less than 1/2 as long as its maximum width (26:56); fore lobe narrower than hind lobe (48:56); anterolateral angles rimmed, rounded, produced forward as far as collar; lateral notch barely discernible; interlobal depression obsolete; fore disc with 2(1 + 1) round elevations laterally, and with 2(1 + 1) crescent-shaped, semiobliterated callosities mesad of the former; hind disc depressed laterally and medially.

Scutellum shorter than width at base (31:35); lateral borders carinate, sinuate in middle and convex on apical 1/2; tip angularly rounded; disc with median carina extending from basal 1/4 to tip; transversely rugose laterad of it.

Hemelytra reaching 3/4 of tergum VI; apical angle of corium blunt, apical border twice sinuate.

Abdomen longer than its width across segment IV (89:60), with parallel borders from II to V, then converging. PE-angles from II to VI not protruding, PE-VII rounded. Paratergites moderately large, rounded exteriorly and straight interiorly, produced as far as segment IX, which is rounded posteriorly with valves slightly protruding. Spiracles II to VII ventral, VIII lateral and visible from above. Venter convex.

Color: ferrugineous; membrane brown, whitish at base; labium and tarsi yellow.

Total length: 7.16 mm; width of pronotum 2.24 mm; width of abdomen 2.40 mm.

Holotype ♀ (Auckland Museum), New Zealand, Tarowera, 14.X.1935, O. H. Swezey coll.

It is a pleasure to dedicate this species to Dr J. G. Pendergrast, at the University in Auckland, N. Z., who started the first revision of New Zealand's Aradidae.

Ctenoneurus hammaensis Kormilev, new species Fig. 69.

♂. Macropterous. Elongate, constricted at the base of abdomen; granulate.

Anterior process of head with parallel sides, rounded and incised anteriorly, produced beyond tip of antennal segment I; postocular tubercles acute, reaching outer borders of eyes; vertex with "M"-shaped granulation. Labium produced beyond fore border of prosternum.

Anterolateral angles of pronotum angularly rounded, lateral borders slightly convex, converging anteriorly; hind border widely sinuate; interlobal depression indistinct; fore disc flat, with a thin median sulcus and 4(2 + 2) callosities, granulate elsewhere; hind disc granulate. Scutellum flat, with crenulate borders; lateral borders sinuate in middle, convex apically; tip narrowly rounded; disc with a thin, indistinct median carina, granulate laterad of it.

Hemelytra reaching 3/4 of tergum VI, corium obliquely truncate posteriorly, apical border forming an obtuse angle, sinuate interiorly and almost straight exteriorly. Abdomen widening from III to V, then narrowing again. PE-angles not protruding, PE-VII angularly rounded, reaching middle of paratergites; the latter large, obliquely truncate, produced slightly beyond tip of hypopygium; the latter as long as wide, rounded posteriorly and depressed medially, roughly granulate. Spiracles II to VII ventral, placed in an arc far from border, VIII terminal.

Measurements: head 25:25; relative length of antennal segments I to IV: 7.5:7.5:7.5:10; pronotum 25:42; ratio width of fore lobe/width of hind lobe 38:42; scutellum 25:24; abdomen 88:45 across segment V; hypopygium 15:15.

Color: grayish brown; connexivum, tergum VII, and granulation dark brown; membrane sepia brown, whitish at base.

Total length: 6.00 mm; width of pronotum 1.50 mm; width of abdomen 1.60 mm.

Holotype ♂ (BISHOP 9005), New Caledonia, Forêt de Thi, Hamma, 700–800 m, 16.VII.1958, Malkin & Rageau coll.

Ctenoneurus fijiensis Kormilev, new species Fig. 70.

♂. Macropterous. Elongate, with subparallel sides; slightly constricted between segments III and IV, then widening again; finely granulate.

Head almost as long as its width across eyes (♂ 22:21, ♀ 20:20); anterior process slightly tapering, rounded anteriorly, reaching basal 1/3 of antennal segment II; antenniferous tubercles blunt, parallel exteriorly. Eyes large, semiglobose. Postocular tubercles blunt, not reaching outer border of eyes. Vertex rather flat, with a few longitudinal rows of granules, and laterad of them with 2(1 + 1) linear callosities. Antennae moderately strong; relative length of antennal segments I to IV: ♂ 6:6:6:12, ♀ 6:6:5.5:10.5. Labium produced beyond fore border of prosternum.

Pronotum 1/2 as long as its maximum width (♂ 19:35, ♀ 18:35); fore lobe narrower than hind lobe (♂ 33:35, ♀ 31:35); anterolateral angles very slightly produced anteriorly as far as collar and angularly rounded; lateral borders convex and converging anteriorly; hind border slightly sinuate medially. Fore disc with 6(3 + 3) callosities, granulate around them; hind disc granulate.

Scutellum shorter than its basal width (♂ 18:22, ♀ 18:20); lateral borders crenulate, sinuate in middle; tip rounded; disc densely granulate.

Hemelytra reaching hind border (♂), or middle (♀) of tergum VI; apical angle of corium widely rounded, apical border deeply sinuate.

Abdomen longer than its maximum width across segment V (♂ 66:36, ♀ 61:35); PE-angles not protruding, PE-VII angular, reaching middle of paratergites (♂), or basal 1/3 of paratergites (♀). Paratergites (♂) almost reaching tip of hypopygium, the latter shorter than wide (12:16), with a double depression on basal 1/2, and sharp granulation on apical. Paratergites (♀) large, obliquely truncate, 2 × as long as small segment IX, which is slightly notched posteriorly. Connexivum and tergum VII scabrous. Spiracles II to VII ventral, placed at the same distance from border, VIII terminal. Sterna IV to VI with a row of fine granules along anterior border; genital plates of ♀ obliquely rugose.

Color: piceous; hind border of pronotum, corium interiorly, connexiva II and III, and tarsi light brown; labium ochraceous; membrane piceous, whitish at base.

Total length: ♂ 4.43, ♀ 4.11 mm; width of pronotum ♂ 1.25, ♀ 1.25 mm; width of abdomen ♂ 1.28, ♀ 1.25 mm.

Holotype ♂ (BISHOP 9006), Fiji, Viti Levu, Tholo-i-Suva, 29.VI.1924, E. H. Bryan, Jr. coll.
Allotype ♀ (BISHOP), Fiji, Lau, Dugea, 28.VII.1924, E. H. Bryan, Jr. coll.
Paratype: 1 ♀ (BISHOP), Fiji, Vanua Mbalavu, Bavatu, 16.VIII.1938, E. C. Zimmerman coll.

Ctenoneurus spiculifer Kormilev, new species

♂. Macropterous. Elongate, slightly constricted between segments III and IV; connexivum with rows of sharp granules and spicules.

Head as long as width across eyes (23:23); anterior process slightly constricted medially, rounded and notched apically, reaching basal 1/3 of antennal segment II; antenniferous tubercles blunt, with parallel outer borders. Eyes large, semiglobose. Postocular tubercles dentiform, blunt, not reaching outer borders of eyes; vertex flat, roughly granulate. Relative length of antennal segments I to IV: 6.5:6:6:10. Labium reaching hind border of labial groove.

Pronotum shorter than its maximum width (26:40); fore lobe narrower than hind lobe (34:40); collar truncate, anterolateral angles rounded, neither produced anteriorly, nor laterally; lateral borders slightly convex, convergent anteriorly; hind border widely sinuate. Fore disc with 4(2 + 2) narrow, crescent-shaped callosities, granulate elsewhere; interlobal depression weak; hind disc granulate.

Scutellum shorter than its basal width (21:23); lateral borders finely crenulate and slightly sinuate before tip; the latter rounded, not carinate. Disc granulate and with a thin median, granulate carina.

Hemelytra reaching hind border of tergum VI; apical angle of corium acute, apical border sinuate interiorly, straight exteriorly; veins and disc between them granulate.

Abdomen longer than its maximum width across segment V (90:43); tergum limited by granulate carina, tergum VII scabrous and with 2(1 + 1) small granules anteriorly. Connexiva II to V with triple, VI and VII with quadruple rows of sharp granules and spicules, progressively becoming larger from II to VII. Paratergites subcylindrical, obliquely truncate, reaching 3/4 of hypopygium; the latter small, with a median row of fine granules and dispersed, sharp granules laterally and posteriorly. Spiracles II to VII ventral, placed at the same distance from border, VIII lateral and visible from above. Sterna IV to VI carinate anteriorly.

Color: piceous; antennae, hind lobe of pronotum, corium, and venter dark ferrugineous; labium and tarsi yellowish brown; membrane black, whitish at base.

Total length: 5.36 mm; width of pronotum 1.43 mm; width of abdomen 1.54 mm.

Holotype ♂ (BISHOP 9007), NE New Guinea, Wau, Morobe Distr., 1050–1100 m, 15.XII.1961, J., J. H. & M. Sedlacek coll.

Ctenoneurus bergrothianus Kirkaldy, 1908

Ctenoneurus bergrothianus Kirkaldy, 1908, *Proc. Linn. Soc., Sydney* **33:** 352.

DISTRIBUTION: Fiji.

In the collection of the Bishop Museum there is 1 specimen from Fiji (Rewa) and 3 from New Hebrides.

Ctenoneurus coghiensis Kormilev, new species Fig. 71.

♂. Macropterous. Related to *C. hammaensis* n. sp. from New Caledonia, but much smaller and shorter, with parallel sides, not so constricted medially. Head shorter than width across eyes; labium reaching hind border of head. Pronotum relatively shorter and not so flat; anterolateral angles produced anteriorly as far as collar. Scutellum slightly shorter than its width at base. Abdomen barely constricted between segments III and IV, and less dilated posteriorly. Paratergites (♂) smaller, only reaching tip of hypopygium; the latter shorter than wide, rounded posteriorly and depressed on disc. Paratergites (♀) slightly produced beyond small, rounded posteriorly segment IX. Spiracles II to VII ventral, placed at the same distance from border, VIII terminal.

Measurements: head ♂ 20:22, ♀ 22.5:24; relative length of antennal segments I to IV: ♂ 6.5:7:7:9, ♀ 7:8:9:11; pronotum ♂ 21:42, ♀ 22:44; ratio width of fore lobe/width of hind lobe ♂ 35:42, ♀ 37:44; scutellum

♂ 24:25, ♀ 26:27; abdomen ♂ 70:44, ♀ 77:46, both across segment V; hypopygium 12:16.

Color: black (or grayish with black granulation); hind lobe of pronotum partially, and connexivum, with brownish tinge; membrane black, whitish at base; labium and tarsi yellowish brown.

Total length: ♂ 4.93, ♀ 5.46 mm; width of pronotum ♂ 1.50, ♀ 1.57 mm; width of abdomen ♂ 1.57, ♀ 1.64 mm.

Holotype ♂ (BISHOP 9008), New Caledonia, Mt Koghi, 500–750 m, 25–26.X.1967, J. & M. Sedlacek coll.

Allotopotype ♀ (BISHOP), same locality, 23–27.X.1967, same collectors.

Paratype: 1 ♀, New Caledonia, Col des Roussettes, 450–550 m, 4–6.II.1963, G. Kuschel coll.

Ctenoneurus simulans Kormilev, new species

♀. Macropterous. Related and similar to *C. lifuanus* (Montrouzier), 1861, but narrower and with parallel sides; head relatively longer, antennal segment III shorter than IV; labium slightly longer, reaching fore border of prosternum. Pronotum with anterolateral angles less produced anteriorly. Hemelytra longer, reaching 2/3 of tergum VI; apical border of corium strongly convex exteriorly, slightly sinuate interiorly. Abdomen with parallel sides. Paratergites diverging, obliquely truncate, reaching tip of rounded posteriorly segment IX. Spiracles large, ventral from II to VII, placed far from border, VIII terminal.

Measurements: head 27:28, relative length of antennal segments I to IV: 9:10:10:12; pronotum 23:53, ratio width of fore lobe/width of hind lobe 42:53; scutellum 30:32; abdomen 90:54.

Color: piceous to black; membrane black, whitish at base; coxae, tarsi and labium yellowish brown.

Total length: 6.50 mm; width of pronotum 1.89 mm; width of abdomen 1.93 mm.

Holotype ♀ (BISHOP 9009), New Caledonia, 10 km S of Koh, 300 m, 31.I.1963, G. Kuschel coll.

Ctenoneurus samoaensis Kormilev, new species Fig. 72.

♂. Macropterous. Elongate, narrow, constricted at base of abdomen, then widening again; abdomen with sparse, erect bristles.

Anterior process of head with parallel sides, rounded and incised anteriorly, reaching middle of antennal segment II; postocular borders parallel, angularly rounded posteriorly; vertex with 2(1 + 1) rows of granules converging, but not reaching each other; other similar rows mesad of infraocular carinae. Labium long, produced beyond fore border of prosternum.

Pronotum with anterolateral angles slightly produced anteriorly beyond collar; lateral borders slightly convex at hind lobe, converging at fore lobe; hind border widely sinuate. Fore disc with 4(2 + 2) callosities, finely granulate elsewhere; hind disc finely and densely granulate. Scutellum with lateral borders straight and crenulate, tip rounded; disc finely granulate, depressed along lateral borders. Hemelytra almost reaching hind border of tergum VI (♂), or 1/2 of tergum VI (♀); apical border of corium straight, sinuate interiorly.

Abdomen constricted between segments III and IV, then widening again. Discs of connexiva and terga VI and VII with scarce, fine granules; connexiva VII produced mesad, meeting one another and separating short tergum VII from hypopygium (♂), or tergum VIII (♀). PE-angles not protruding, PE-VII angular, reaching 2/3 (♂), or 1/2 (♀) of paratergites; the latter slightly shorter than hypopygium (♂), or produced 2× as far as small segment IX (♀). Hypopygium depressed in the form of an inverted "V", its apical 1/2 roughly granulate. Spiracles II to VII ventral, placed in an arc; spiracles II are half as distant from border as VII; VIII terminal.

Measurements: head ♂ 20:19, ♀ 20:19; relative length of antennal segments I to IV: ♂ 6:5:5:9, ♀ 5:4:4.5:9; pronotum ♂ 19:32, ♀ 17:30; ratio width of fore lobe/width of hind lobe ♂ 28:32, ♀ 28:30; scutellum ♂ 18:18, ♀ 17.5:17.5; abdomen ♂ 69:34, ♀ 65:30, both across segment VI; hypopygium 12:14.

Color: reddish brown; anterior process of head, 1st 2 antennal segments, hind lobe of pronotum, clavus, corium interiorly, connexiva II and III, and tips of femora golden brown; ventral side and femora dark ferrugineous; labium, trochanters and tarsi yellow.

Total length: ♂ 4.50, ♀ 4.28 mm; width of pronotum ♂ 1.14, ♀ 1.07 mm; width of abdomen ♂ 1.21, ♀ 1.07 mm.

Holotype ♂ (BISHOP 9010), Samoa, Upolu, Afiamalu, 660 m (2200′) 11.VII.1940, E. C. Zimmerman coll., (beating dead branches).

Allotopotype ♀ (BISHOP), same locality and collector, 9.VI.1940.

Paratopotypes: 8 ♂♂ & 5 ♀♀, same locality and collector, 11.VI-11.VII.1940; 1 ♀, Samoa, Upolu, Sigaele 27.VII.1940, E. C. Zimmerman coll. (beating), and 1 ♂, Upolu, Malololei Rd, 8.VII.1940, E. C. Zimmerman coll., (all in BISHOP).

C. samoaensis n. sp. belongs to the group with a long, narrow body, constricted at the base of the abdomen, then widening again, and with the large spiracles placed in an arc.

Ctenoneurus prominens Kormilev, new species Fig. 73.

♂. Macropterous. Similar to *C. lifuanus* (Montrouzier), 1861, but slightly larger, with more parallel sides and finer granulation. Anterior process of head reaching basal 1/4 of antennal segment II; antennae relatively longer, antennal segment III distinctly longer than II (subequal in *C. lifuanus*); postocular tubercles acute, almost reaching outer border of eyes. Pronotum with anterolateral angles rounded, neither produced anteriorly, nor laterally. Scutellum with straight lateral borders, tip more rounded; median carina is clearly visible on hind half of disc; laterad of it disc is rugose. Hemelytra are longer, reaching 2/3 of tergum VII; apical angle of corium acute, apical border straight exteriorly, sinuate interiorly. Abdomen with parallel sides from II to V, then convex and converging; PE-angles not protruding, PE-VII rounded, reaching middle of paratergites; the latter obliquely truncate, reaching as far as hypopygium. Hypopygium semiglobose, densely and roughly granulate; disc twice (1 + 1) depressed at base. Spiracles II to VII large, placed at the same distance from border; VIII lateral and visible from above.

Measurements: head 29:30; relative length of antennal segments I to IV: 10:10:13:15.5; pronotum 25:63; ratio width of fore lobe/width of hind lobe 50:63; scutellum 30:35; abdomen 90:66, hypopygium 13:24.

Color: piceous; connexiva III to VII, paratergites, coxae and trochanters, middle of meso- and metasternum, and venter orange-brown; membrane black, paler along basal border; tips of tibiae, labium and tarsi are yellowish brown.

Total length: 6.25 mm; width of pronotum 2.25 mm; width of abdomen 2.36 mm.

Holotype ♂ (BISHOP 9011), NE New Guinea, Wau, Morobe Distr., 1200–1300 m, 6–12.IV. 1962, J. Sedlacek coll.

Ctenoneurus aberrans Kormilev, 1967

Ctenoneurus aberrans Kormilev, 1967, *Rec. S. Austral. Mus.* **15**(3): 531.

DISTRIBUTION: New Guinea (Papua).

In the collections of the Bishop Museum is one specimen of this curious species, also from New Guinea.

Genus **Neuroctenus** Fieber, 1861

Neuroctenus Fieber, 1861, is the largest genus after *Mezira* A. S. in the subfamily Mezirinae and is distributed almost world-wide, with the exception of Europe, Africa north of the Sahara, the Middle East, Siberia, and Pacific Islands east of the line Marianas-New Guinea-Bismarck Arch.-Solomon Is. It is heterogeneous. Some Oriental species are similar to *Mezira* A. S., and some were even described as belonging to the latter. Others have a very short labium, only reaching a line connecting the hind borders of the eyes. Some have fused connexiva II and III, as in some species of *Ctenoneurus* Bergroth. But all species have in common: a transverse carina, or row of granules, along the fore border of sterna IV to VI; a flat body without large projections, or lobes; a short, or very

short, labium at most reaching fore border of prosternum, and the ♀♀ mostly with the border of sternum VII trisinuate, with the median sinus having a small projection in the middle, making it bilobate, though the last character is difficult to observe in some species.

Neuroctenus Fieber, 1861, is one of the oldest genera among Mezirinae, and as such shows a tendency to secondary modifications in various degrees of development. Although there are no true brachypterous or micropterous species yet recorded of *Neuroctenus*, as we find, for example, in another old genus, *Mezira* A. S., 1843, or in *Artabanus* Stål, 1865, we can observe a certain degree of abbreviation of hemelytra in some species, particularly in the ♀'s, where they often extend only to middle of tergum VI. Other characters, also found in the Oriental and southern Pacific species of *Neuroctenus*, are the abbreviation of the labium, which ranges from extending over the fore border of the prosternum to not reaching a line connecting the hind borders of eyes. The third character observed is the fusion of connexiva II and III. We can observe all degrees, from incipient fusion, as in *N. eurycephalus* n. sp., to complete fusion as in *N. minutus* n. sp., *N. sertiventris* n. sp., and others. Particularly interesting is *N. appendiculatus* n. sp., in which connexiva II and III are completely fused on the exterior half, and separated by a thin carina on the interior half.

Key to Oriental, Australian & Southern Pacific species of *Neuroctenus* Fieber

1 (2). All spiracles ventral and not visible from above.....2
At least spiracles VIII lateral, or latero-terminal, and visible from above.....11

2 (1). Antennal segment IV longer than III (10:9). (China).....**confusus** Kormilev, 1955
Antennal segment IV always shorter than III.....3

3 (2). Smaller species, less than 6.0 mm. (Australia).....**gracilis** Kormilev, 1965
Larger species, over 6.5 mm.....4

4 (3). Anterior process of head very short, reaching at most 2/3 of antennal segment I.....5
Anterior process longer, reaching at least 3/4 of antennal segment I.....6

5 (4). Lateral borders of pronotum straight, not sinuate in middle; antennal segment III almost 2 × as long as II (21:12); segment IX (♀) with 2(1 + 1) lateral appendices. (China)... ..... **bicaudatus***
Lateral borders of pronotum sinuate medially; antennal segment III only 1.5 × as long as II (15:10); segment IX (♀) without appendices. (Kashmir).....**kashmirensis***

6 (4). Hypopygium (♂) slightly bilobate posteriorly. (Taiwan).....**singularis***
Hypopygium evenly rounded posteriorly, never bilobate.....7

7 (6). Antennal segment I slightly longer than II; paratergites (♀) distinctly shorter than segment IX.....8
Antennal segment I slightly shorter than II, paratergites (♀) reaching to, or produced beyond tip of segment IX.....9

8 (7). Granulation of body fine, paratergites (♀) shorter, reaching 1/2 of segment IX; hypopygium relatively wider (15:26). (Burma to New Guinea).....**par** Bergroth, 1887
Granulation coarse, paratergites (♀) longer, reaching 2/3 of segment IX; hypopygium narrower (15:24). (Laos).....**scabrosus***

9 (7). Anterior process of head produced beyond tip of antennal segment I; hypopygium (♂) with a semicircular depression at base; paratergites (♀) distinctly produced beyond tip of segment IX. (Australia).....**majusculus** Bergroth, 1887
Anterior process at most reaching tip of antennal segment I; hypopygium (♂) with a median depression on posterior half of disc; paratergites (♀) only slightly produced

*Described as new.

beyond tip of segment IX.....10

10 (9). Anterior process of head not reaching tip of antennal segment I; hypopygium (♂) cordate, larger (16:28); segment IX (♀) triangular. (Australia).....**grandis** Kormilev, 1965

Anterior process reaching tip of antennal segment I; hypopygium (♂) transversely ovate (13:23); segment IX (♀) trapezoidal, truncate posteriorly. (Australia).....**proximus** (Walker), 1873

11 (1). Only spiracles VIII lateral, or latero-terminal, and visible from above.....12

Spiracles VII and VIII lateral, or sublateral, and visible from above.....35

12(11). Smaller species, ♂ less than 4.0 mm, ♀ 5.00 mm; membrane white. (Borneo, Java)...**minusculus***

Larger species, ♂ at least 4.8 mm; membrane generally dark, if white, hyaline, then ♂ is over 5.0 mm and lateral borders of abdomen distinctly crenulate.....13

13(12). Anterior process of head produced beyond tip of antennal segment I.....14

Anterior process at most reaching tip of antennal segment I.....20

14(13). Antennal segment III shorter than IV.....15

Antennal segment III at least as long as IV.....17

15(14). Smaller species, 6.0 mm or less; PE-angles not protruding, exterior borders of connexiva IV to VI straight, VII slightly convex.....16

Larger species, over 6.4 mm; PE-angles distinctly protruding, exterior borders of connexiva IV to VI convex, VII slightly sinuate medially. (New Guinea).....**sertiventris***

16(15). Larger species, ♀ slightly over 6.0 mm; postocular tubercles at most reaching outer borders of eyes; corium produced beyond fore border of connexivum III, apical angle of corium acute; spiracles VII ventral, placed slightly off margin. (Bismarck Arch.)...**gressitti***

Smaller species, ♀ less than 6.0 mm; postocular tubercles slightly produced beyond outer margin of eyes; corium not reaching hind border of connexivum II, apical angle of corium blunt; spiracles VII ventral, placed close to margin. (Marianas, Palau).....**pacificus** Usinger, 1946

17(14). Smaller species, less than 5.5 mm. (Marianas).....**angulatus** Matsuda & Usinger, 1957

Larger species, over 6.0 mm.....18

18(17). Connexivum bicolorous, hind borders of connexiva yellow; paratergites (♀) narrow, triangular, or subtriangular, at most as wide as segment IX.....19

Connexivum concolorous; paratergites (♀) truncate, wider than segment IX. (Solomon Is.).....**necopinatus***

19(18). Head longer than width across eyes (31:29); antennae longer, more than 1.7 × as long as head width across eyes; paratergites (♀) subtriangular, 2 × as long as segment IX. (New Guinea).....**flavosuturatus** Bloete, 1965

Head shorter than its width across eyes (27:30); antennae less than 1.5 × as long as head width across eyes; paratergites (♀) rounded posteriorly, barely longer than segment IX. (New Guinea).....**hortatrix***

20(13). Antennal segment III shorter than IV. (Taiwan, S. China).....**taiwanicus** Kormilev, 1955

Antennal segment III at least as long as IV.....21

21(20). Hind border of sternum VI (♂) roundly produced forward laterad of straight, median portion. (Palau Is.).....**abdominalis** Matsuda & Usinger, 1957

Hind border of sternum VI (♂) not, or very slightly, produced forward laterad of median, straight portion.....22

22(21). Membrane hyaline, transparent or translucent.....23

Membrane always dark, neither transparent, nor translucent.....24

23(22). Corium coriaceous; lateral borders of abdomen roughly crenulate; hypopygium small (8:16); segment IX (♀) narrower than paratergite (7:9). (Philippines, Borneo, Engano).....**serrulatus** Stål, 1870

Corium hyaline, translucent, if coriaceous, then hypopygium larger, and segment IX as

wide as paratergites.....**hyalinipennis***

a. Corium hyaline, translucent; hypopygium semicircular posteriorly. (Philippines, Java, Engano, Papua).....**hyalinipennis** s. str.

Corium coriaceous, or at most semitranslucent; hypopygium subtrapezoidal. (Australia)... .....**hyalinipennis australicus***

24(22). Connexivum bicolorous. (New Guinea).....**lobuliventris***

Connexivum concolorous 25

25(24). Hypopygium (♂) pyriform.....26

Hypopygium transverse, evenly rounded posteriorly.....27

26(25). PE-VI angles (♂) produced far beyond outer border of connexivum VII and rounded; PE-VII forming subangular, rounded lobes; spiracles VII placed close to margin, though not visible from above. (New Guinea).....**sedlaceki***

PE-VI angles (♂) only slightly protruding, angular; PE-VII rounded without forming lobes; spiracles VII placed far from margin. (China).....**sinensis** Kormilev, 1955

27(25). Lateral borders of abdomen very finely serrate; paratergites (♀) rounded posteriorly and smooth, not serrate.....28

Lateral borders of abdomen more roughly serrate; paratergites (♀) subtruncate and conspicuously serrate posteriorly.....30

28(27). Postocular spines blunt, only reaching outer border of eyes; paratergites (♀) 1/2 as long as rounded posteriorly segment IX.....29

Postocular spines acute, produced far beyond outer margin of eyes; paratergites (♀) 2 × as long as subtruncate posteriorly segment IX. (Australia).....**handschini** Kormilev, 1953

29(28). Labium very short, not reaching line connecting hind borders of eyes; antennal segment III distinctly longer than IV (12.5:11). (New Guinea).....**brevirostris***

Labium longer, but not reaching hind border of labial groove; antennal segment III as long as IV. (India).....**affinis** Distant, 1913

30(27). Antennae thick.....31

Antennae thin.....32

31(30). Antennae longer, ratio length of antennae/width of head across eyes 5:3. (Philippines, New Guinea).....**crassicornis***

Antennae shorter, ratio length of antennae/width of head across eyes 4:3. (New Guinea)... .....**vicinus** Signoret, 1880

32(30). Hypopygium (♂) half as long as wide; paratergites (♂) wider, as long as their posterior border width and truncate posteriorly. (New Guinea).....**pauperulus***

Hypopygium (♂) more than half as long as wide; paratergites (♂) narrower, longer than their width posteriorly and rounded posteriorly.....33

33(32). Lateral borders of pronotum and abdomen very finely serrate; segment IX (♀) much shorter and narrower than paratergites (7.5:9) and incised posteriorly. (Solomon Is.) .....**fulgidus***

Lateral borders of pronotum and abdomen roughly serrate; segment IX (♀) as wide (8:8), or almost as wide (8:8.5), as paratergites and rounded posteriorly.....34

34(33). Smaller species, less than 6.0 mm; antennal segment III as long as IV (9:9); ratio length/width of hypopygium 1:1.5. (New Guinea).....**seclusus***

Larger species, over 6.0 mm; antennal segment III distinctly longer than IV (12.5:11); ratio length/width of hypopygium 1:1.8. (Borneo).....**foratus***

35(11). Labium slightly produced beyond hind border of labial groove. (Guam)..... .....**variegatus** Matsuda & Usinger, 1957

Labium at most reaching hind border of labial groove.....36

36(35). Labium reaching, or almost reaching, hind border of labial groove, which is open posteriorly 37

Labium distinctly shorter than labial groove, which is open or closed posteriorly.....54
37(36). Connexivum bicolorous, hind borders of connexiva yellow, or reddish, rest of disc dark.....38
Connexivum concolorous, or testaceous with dark patches.....40
38(37). Anterior process of head not dilated anteriorly, lateral borders of pronotum strongly sinuate 39
Anterior process of head strongly dilated anteriorly, lateral borders of pronotum only slightly sinuate. (New Guinea).....**granuliger***
39(38). Antennae longer, ratio length of antennae/width of head across eyes 5:3; antennal segment II distinctly shorter than III (10:15). (New Guinea).....**acutus***
Antennae shorter, ratio length of antennae/width of head across eyes 4:3; antennal segment II only slightly shorter than III (10:12). (New Guinea).....**incautus***
40(37). Anterior process of head at most reaching tip of antennal segment I.....41
Anterior process slightly produced beyond tip of antennal segment I.....42
41(40). Smaller species, ♀ 5.0 mm; anterior process slightly shorter than antennal segment I; paratergites (♀) reaching 2/3 of segment IX, the latter incised posteriorly; valves longer than oviduct. (Java).....**javanicus** Bloete, 1965
Larger species, ♀ over 6.5 mm; anterior process reaching tip of antennal segment I; paratergites (♀) reaching tip of segment IX, the latter evenly rounded posteriorly. (Philippines) .....**morio***
42(40). Smaller species, ♀ 6.0 mm or less.....43
Larger species, ♀ 6.5 mm or more.....48
43(42). Antennal segment III distinctly shorter than IV (6.5:8). (Palau Is.).....
.....**obsoletus** Matsuda & Usinger, 1957
Antennal segment III subequal or longer than IV.....44
44(43). Anterolateral angles of pronotum slightly produced anteriorly; hypopygium (♂) very small, almost half as wide as head width across eyes (11:21). (Palau Is.).....
.....**palauensis** Matsuda & Usinger, 1957
Anterolateral angles of pronotum evenly rounded; hypopygium (♂) larger, at least 2/3 as wide as head width across eyes.....45
45(44). Body subparallel (♀), or slightly widening posteriorly (♂); hypopygium conical, with straight, converging, posterolateral borders; anterior process of head slightly widening anteriorly. (China, Laos).....**angustus** Hsiao, 1964
Body elongate ovate in both sexes; hypopygium (♂) not conical, with convex posterolateral borders, or evenly rounded posteriorly.....46
46(45). Smaller species, 5.0–5.5 mm; hypopygium (♂) narrower, ratio length/width 13:18. (Palau Is., New Guinea).....**dybasi***
Larger species, 5.5–6.0 mm; hypopygium wider, ratio length/width 13:20, or 15:23.....47
47(46). Exterior border of connexivum VII (♂) straight, PE-VII rounded, not produced; hypopygium (♂) smaller (13:20), not depressed on disc. (Larat, Ceram).....**muiri***
Exterior border of connexivum VII (♂) slightly sinuate, PE-VII slightly produced, forming a small, rounded lobe; hypopygium larger (15:23) and longitudinally depressed on disc. (Celebes).....**basalis** (Walker), 1873
48(42). Anterolateral angles of pronotum expanded into small, rounded lobes. (New Guinea, Bismarck Arch., Solomon Is.).....**eurycephalus***
Anterolateral angles of pronotum slightly, evenly expanded, but not forming small, rounded lobes 49
49(48). Antennal segment I as long as II, and III as long as IV.....50
Relative lengths of antennal segments not as above.....52
50(49). Head longer than width across eyes (30:27.5).....51
Head as long as width across eyes (26:26). (Java).....**luchti***

51(50). Hypopygium (♂) more elongate, ratio length/width 17:23; paratergites reaching 2/3 of hypopygium. (Philippines)..... **persimilis***

Hypopygium shorter, ratio length/width 12.5:20; paratergites reaching 3/4 of hypopygium; paratergites (♀) rounded, as long as segment IX. (Philippines)..... **millironi***

52(49). Segment IX (♀) without appendices..... 53

Segment IX (♀) with 2(1 + 1) fusiform appendices laterally. (Philippines)..... **appendiculatus***

53(52). Body ovate, distinctly widening posteriorly; paratergites (♀) longer than segment IX; antennal segment III as long as IV (16:16). (Philippines)..... **egelidus***

Body elongate with subparallel sides, only slightly widening posteriorly; antennal segment III distinctly shorter than IV (16:21); paratergites (♀) as long as segment IX. (Borneo) ..... **longicornis***

54(36). Body shiny, membrane shiny dark brown to black, whitish at base. (India to New Guinea)..... **rubrescens** (Walker), 1873

Body more or less opaque, membrane also..... 55

55(54). Hind borders of connexiva II to VI yellow; exterior border of connexivum VII sinuate; PE-VII (♂) produced as small, apically rounded lobes, reaching middle of hypopygium; the latter subcordate, longitudinally depressed on disc; paratergites (♂) slender, reaching tip of hypopygium. (New Guinea)..... **luteomarginatus** Kormilev, 1958

Hind borders of connexiva II to VI not yellow..... 56

56(55). Head distinctly longer than width across eyes. (Philippines)..... **ferreus***

Head at most as long as width across eyes; if slightly longer, then anterolateral angles of pronotum are slightly expanded, forming small, subangular, apically rounded lobes 57

57(56). Anterior process of head only reaching tip of antennal segment I; hypopygium (♂) bilobate posteriorly. (Laos)..... **bilobatus***

Anterior process of head slightly produced beyond tip of antennal segment I; hypopygium not bilobate..... 58

58(57). Anterolateral angles of pronotum narrowly rimmed, but not forming subtriangular, or rounded lobes..... 59

Anterolateral angles of pronotum more or less expanded into subtriangular, or rounded lobes 60

59(58). Antennal segment I longer than II (7:6); postocular tubercles small, distant from eyes, not reaching outer borders of the latter; discs of connexiva flat, and very finely granulate. (Philippines)..... **minor***

Antennal segment I shorter than II (8:9); postocular tubercles larger, and at least slightly produced beyond outer borders of eyes; discs of connexiva roughly scabrous. (Java)... ..... **indonesicus***

60(58). Smaller species, less than 5.75 mm; anterolateral angles of pronotum only slightly expanded, forming crescent-shaped lobes; anterior process of head very robust, sides almost parallel, 3 × narrower than head width across eyes. (Philippines, Palau Is.)..... **mayri** Stål, 1870

Larger species, over 5.75 mm; anterolateral angles of pronotum forming more produced lobes; anterior process of head narrower, 4 × narrower than head width across eyes; if only 3× narrower, then constricted in middle..... 61

61(60). Anterolateral angles of pronotum with small, but strongly produced, semicircular lobes; postocular tubercles small, acute, but not reaching outer borders of eyes. (New Guinea) ..... **lobulatus***

Anterolateral angles of pronotum less produced, forming subangular, or apically rounded, but not semicircular lobes; postocular tubercles at least slightly produced beyond outer border of eyes..... 62

62(61). Segment IX (♀) angular, or slightly tricuspidate, with valves shorter than oviduct; paratergites (♀) 2 × as long as segment IX. (Ceram).....**ceramensis***
Segment IX (♀) incised, or tricuspidate posteriorly, but valves longer than oviduct; paratergites (♀) only slightly longer than segment IX. (New Guinea).....
.....**subfurcatus** (Walker), 1873

Table 1. Distribution of *Neuroctenus* species in the Oriental Region, Australia and the southern Pacific.

Country	Kashmir	India & Ceylon	Burma	Indo-China*	S. China	Taiwan	Indonesia & Malaya	Philippines	Marianas Is.	Palau Is.	New Guinea	Bismarck Arch.	Solomon Is.	Australia
number of species	1	3	1	3	5	2	10	12	3	5	20	3	3	6

*Note: "Indo-China" = Thailand, Laos and Viet Nam together.

Neuroctenus bicaudatus Kormilev, new species Fig. 74.

♀. Macropterous. Elongate ovate, finely granulate and finely punctured between granules. Granulation setigerous with very short, inclined hairs.

Head much shorter than width across eyes (31:37); anterior process short, robust, with parallel sides, notched apically, reaching slightly beyond 1/2 of antennal segment I; antenniferous tubercles acute, divergent. Eyes moderately large, semiglobose. Postocular tubercles small, acute, barely reaching outer borders of eyes. Vertex granulate. Antennae slender, long, relative length of antennal segments I to IV: 18:12:21:15. Labium reaching hind border of labial groove.

Pronotum 1/2 as long as wide (40:80); collar thin, crenate; anterolateral angles moderately expanded, rounded and reflexed, produced forward beyond collar, and sideways. Lateral notch absent; lateral borders parallel, strongly converging anteriorly; hind border deeply sinuate in middle. Fore disc with 4(2 + 2) ridges, of which 2(1 + 1) inner ones are rugose, and 2(1 + 1) outer ones scabrous. Hind disc granulate.

Scutellum shorter than its basal width (35:45); lateral borders carinate, and sinuate at apical 1/3; median ridge high and narrow, disc laterad of it transversely rugose.

Hemelytra reaching almost to hind border of tergum VI; corium reaching middle of connexivum III, its apical angle acute, apical border slightly sinuate exteriorly, straight interiorly; disc densely punctured.

Abdomen ovate, longer than width across segment IV (125:100); lateral borders evenly rounded, PE-angles II to VI not protruding, PE-VII rounded. Paratergites large, rounded, reaching tip of appendices of segment IX. The latter triangular, pointed in middle posteriorly, and with 2(1 + 1) appendices laterally, produced far beyond its tip. All spiracles ventral, placed far from border.

Legs. Thin, unarmed.

Color: ferrugineous to piceous; membrane brown with whitish incrustation.

Total length: 8.21 mm; width of pronotum 2.86 mm; width of abdomen 3.57 mm.

Holotype ♀ (Zoological Institute, Academy of Sciences USSR, Leningrad), China, Szetschwan, Ta-tsien-lu, St. Brenning coll.

Paratopotypes: 3 ♀♀, collected with holotype, in the above and Bishop collections.

N. bicaudatus n. sp. is peculiar in the genus, in having a short head, a very long antennal segment III, and the particularly curious appendices on segment IX.

Neuroctenus kashmirensis Kormilev, new species Fig. 75–76.

♂. Macropterous. Related to *N. bicaudatus* n. sp., but slightly smaller, granulation less conspicuous, partially blurred (pronotum); sides of body more parallel, lateral borders of pronotum slightly sinuate in middle; exterior borders of connexiva slightly convex, PE-angles barely protruding, PE-VII rounded in both

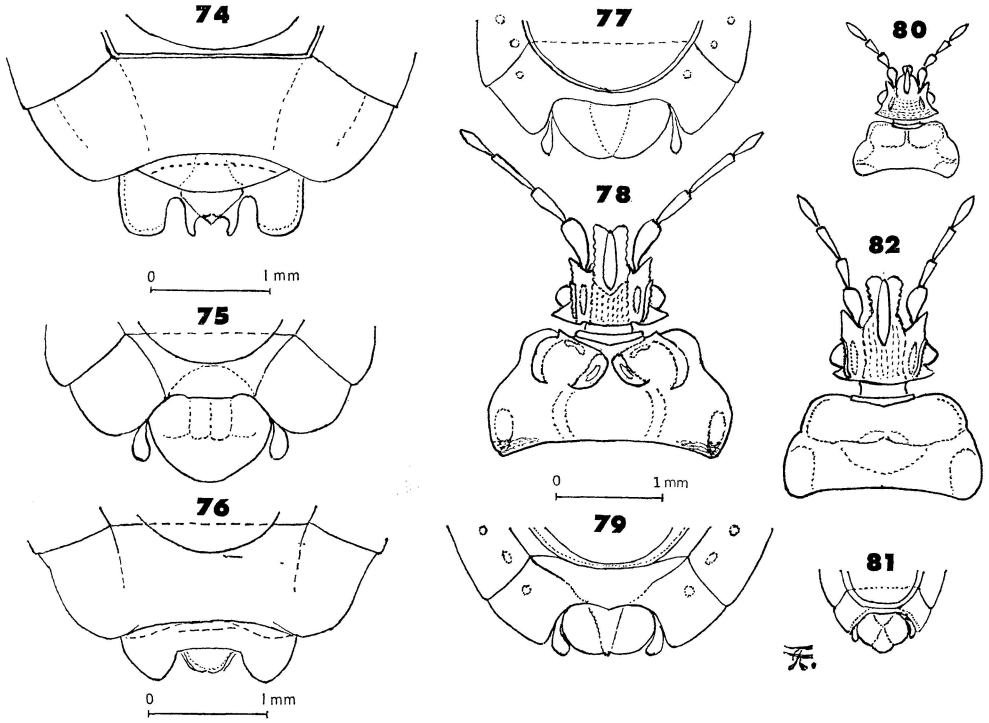


Fig. 74–82. 74, *Neuroctenus bicaudatus* n. sp., ♀, tip of abdomen from above; 75, *N. kashmirensis* n. sp., ♂, tip of abdomen from above; 76, same, ♀, tip of abdomen from above; 77, *N. singularis* n. sp., ♂, tip of abdomen from above; 78, *N. scabrosus* n. sp., ♂, head and pronotum; 79, same, tip of abdomen from above; 80, *N. minusculus* n. sp., ♂, head and pronotum; 81, same, tip of abdomen from above; 82, *N. gressitti* n. sp., ♀, head and pronotum.

sexes; hypopygium (♂) obovate, strongly declivous in apical 2/3; segment IX (♀) rounded posteriorly and without appendices.

Anterior process of head reaching 2/3 of antennal segment I; postocular tubercles acute, reaching, or slightly passing outer borders of eyes; vertex finely granulate. Pronotum deeply sinuate anteriorly, anterolateral angles rounded and directed forward, produced far beyond collar; 4(2 + 2) ridges of fore lobe somewhat obscured; 2(1 + 1) inner ones narrow, carinate, 2(1 + 1) outer ones ovate. Scutellum with robust, carinate borders, and a median ridge; lateral borders sinuate in middle, disc transversely rugose. Hemelytra reaching 1/2 of tergum VII (♂), or basal 1/3 of tergum VII (♀). Paratergites (♂) small, clavate, reaching 3/4 of hypopygium, the latter twice (1 + 1) depressed at base. Paratergites (♀) large, rounded posteriorly, produced far beyond small segment IX. All spiracles ventral, placed far from border.

Legs. Unarmed.

Measurements: head length/width ♂ 30:34, ♀ 31:35; relative length of antennal segments I to IV: ♂ 15:10:18.5:15, ♀ 15:12:21:15; pronotum ♂ 30:70, ♀ 35:76; ratio width of fore lobe/width of hind lobe ♂ 57:70, ♀ 62:76; scutellum ♂ 32:40, ♀ 34:42; abdomen ♂ 108:82 across segment V, ♀ 110:87 across segment IV; hypopygium 25:29, segment IX (♀) 5:15.

Color: ferrugineous, partially darker; labium and tarsi yellowish brown; membrane brown, paler at base.

Total length: ♂ 7.00, ♀ 7.61 mm; width of pronotum ♂ 2.50, ♀ 2.71 mm; width of abdomen ♂ 2.93, ♀ 3.18 mm.

Holotype ♂ (Zoological Institute, Academy of Sciences, Leningrad), Kashmir, Rost coll., ex Breddin collection, with label "Mezira horni Kiritshenko," a nomen nudum.

Allotopotype ♀, collected with holotype, same collection.

The locality of this species is very interesting; to my knowledge, it is the westernmost locality for this genus in the Oriental Region.

Neuroctenus singularis Kormilev, new species Fig. 77.

♂. Macropterous. Elongate, slightly widening posteriorly until segment V, then narrowing again; head, pronotum, scutellum, and partially corium, granulate; connexivum finely punctured.

Head as long as width across eyes (29:29); anterior process long, tapering and rounded anteriorly, reaching tip of antennal segment I; antenniferous tubercles acute, with subparallel outer borders. Eyes semiglobose, protruding. Postocular tubercles acute, reaching outer borders of eyes. Vertex densely granulate, interocular callosities deep and wide. Antennae moderately stout, relative length of antennal segments I to IV: 11:11: 13:12.5. Labium reaching hind border of labial groove, which is open posteriorly.

Pronotum shorter than wide (25:55); ratio width of fore lobe/width of hind lobe 43:55. Collar slightly sinuate anteriorly; anterolateral angles slightly expanded, rounded and produced anteriorly as far as collar; lateral notch sinuate; lateral borders of hind lobe parallel, converging anteriorly; hind border widely sinuate. Fore disc with 4(2 + 2) distinct ridges, and with a deep, narrow, median sulcus; hind disc densely granulate, uneven.

Scutellum shorter than its basal width (27:32); lateral borders carinate and sinuate medially; tip angularly rounded; median carina very thin, extending only on fore 2/5 of disc, then becomes wider and obscured; disc densely granulate.

Hemelytra extending to 2/3 of tergum VII; apical angle of corium blunt, apical border convex exteriorly, sinuate interiorly.

Abdomen longer than width across segment V (85:65); lateral borders slightly convex; PE-angles III to VI barely protruding, PE-VII angularly rounded; connexiva with concave discs, particularly those of III and VII. Paratergites clavate, thin, reaching almost tip of hypopygium; the latter short and wide (13:27) slightly bilobate posteriorly, and with a low, somewhat obscured, median ridge. Spiracles II to VIII ventral and not visible from above. Venter rather convex (as in some Oriental *Mezira* species), with glabrous and raised posterior borders of sterna III to V, and ovate, glabrous spot laterad of middle; sterna III to VI with a row of granules along fore border.

Color: ferrugineous, partially blackened; membrane blackish, white at base.

Total length: 6.72 mm; width of pronotum 2.20 mm; width of abdomen 2.60 mm.

Holotype ♂ (BISHOP 9012), Taiwan, Musha, 5.XII.1963, T. C. Maa coll.

N. singularis n. sp. is not closely related to any Oriental species; rather it looks like a *Mezira* from the Russian Far East or Japan. It may be separated from other species as is indicated in the key.

Neuroctenus par Bergroth, 1887

Neuroctenus par Bergroth, 1887, *Oefv. Finska Vet-Soc. Förh.* **29:** 180.

Neuroctenus parus Bloete, 1965 (not Hsiao, 1964)

DISTRIBUTION: Thailand, across Indonesia and Philippines to New Guinea, Bismarck Arch. and Solomon Is.

In the collections of the Bishop Museum there are many specimens of this species from Thailand, Laos, Viet Nam, Java, Borneo, Luzon, Camarines, Mindanao, Negros, New Guinea (NW & NE), New Britain and Guadalcanal.

Specimens from Cochin-China, identified by Bloete as *Neuroctenus parus* Hsiao, 1964, belong to *N. par* Bergroth.

Neuroctenus scabrosus Kormilev, new species Fig. 78–79.

♂. Macropterous. Ovate; head, pronotum, scutellum, veins of corium, and hypopygium, granulate;

connexivum finely and densely punctured; lateral borders of pronotum and abdomen finely crenulate.

Head almost as long as width across eyes (♂ 24:25, ♀ 25:25); anterior process robust, with parallel sides, rounded and incised anteriorly, reaching 3/4 of antennal segment I; antenniferous tubercles acute with subparallel exterior borders. Eyes semiglobose. Postocular tubercles acute, slightly produced beyond outer borders of eyes. Vertex roughly granulate, infraocular callosities long and narrow. Relative length of antennal segments I to IV: ♂ 12:10:14:10, ♀ 12:10.5:14:10. Labium almost reaching hind border of labial groove, which is closed posteriorly.

Pronotum less than 1/2 as long as its maximum width (♂ 25:57, ♀ 25:57); fore lobe narrower than hind lobe (♂ 43:57, ♀ 43.5:57). Collar slightly sinuate anteriorly; anterolateral angles slightly expanded, rounded and finely crenulate, produced forward as far as collar. Lateral notch forming obtuse angle; lateral borders of hind lobe convex, converging anteriorly and posteriorly. Fore disc with 4(2 + 2) low ridges and 4(2 + 2) callosities: the inner ones on inner ridges, the outer ones between ridges. Hind disc roughly granulate anteriorly, transversely rugose latero-posteriorly.

Scutellum shorter than its basal width (♂ 30:39, ♀ 30:38); lateral borders carinate, straight, convex near apex; the latter angular; median carina thin, extending from basal 1/3 to apex; disc longitudinally rugose at base, granulate elsewhere.

Hemelytra reaching hind border of tergum VI (♂), or 2/3 of tergum VI (♀); apical angle of corium acute, apical border twice sinuate.

Abdomen ovate, longer than its maximum width across segment IV (♂ 92:80, ♀ 98:83); PE-angles II to VI not protruding, PE-VII rounded in both sexes. Paratergites (♂) clavate, converging, reaching tip of hypopygium; the latter transverse, much shorter than wide (12.5:22), slightly bilobate posteriorly and with a triangular, low, median ridge, reaching tip of disc. Paratergites (♀) large, tapering and rounded posteriorly, reaching 1/2 of segment IX, which is short and wide at base (5:11), deeply incised posteriorly. All spiracles ventral.

Legs. Femora and upper surface of tibiae, roughly granulate.

Color: ferrugineous; membrane black, whitish at base.

Total length: ♂ 6.88, ♀ 7.12 mm; width of pronotum ♂ 2.28, ♀ 2.28 mm; width of abdomen ♂ 3.20, ♀ 3.32 mm.

Holotype ♂ (BISHOP 9013), Laos, Ile de Khong, 7.IX.1965, native collector.

Allotopotype ♀ (BISHOP), collected with holotype.

Paratopotypes: 3 ♂♂ & 14 ♀♀, collected with holotype (BISHOP).

Neuroctenus majusculus Bergroth, 1887

Neuroctenus majusculus Bergroth, 1887, *Oefv. Finska Vet.-Soc. Förh.* **29:** 181.

DISTRIBUTION: West Australia.

In the collections of the Bishop Museum there are 16 specimens of this species also from West Australia.

Neuroctenus grandis Kormilev, 1965

Neuroctenus grandis Kormilev, 1965, *Proc. R. Soc. Qld* **77**(3): 28.

DISTRIBUTION: Australia, Queensland.

In the Bishop Museum are 10 adults and 2 nymphs of this species from Australia: Dandenon and Bundaberg.

Neuroctenus minusculus Kormilev, new species Fig. 80–81.

♂. Macropterous. Elongate, slightly widening posteriorly until segment V, then narrowing again; head very finely granulate.

Head shorter than width across eyes (♂ 12:14, ♀ 14:15.5); anterior process small, constricted laterally, dilated, rounded and slightly incised apically, reaching slightly beyond tip of antennal segment I. Antenniferous tubercles tiny, acute, slightly diverging. Eyes semiglobose. Postocular tubercles acute, reaching, or

slightly passing outer borders of eyes. Vertex transversely rugose. Antennae moderately stout, relative length of antennal segments I to IV: ♂ 3:4:4.5:6, ♀ 3.5:4:4.5:7. Labium reaching line connecting hind borders of eyes.

Pronotum less than 1/2 as long as its maximum width (♂ 11:25, ♀ 12:28); fore lobe narrower than hind lobe (♂ 20:25, ♀ 23:28); collar thin, sinuate anteriorly; anterolateral angles rounded and very finely crenulate, neither produced anteriorly, nor laterally; lateral notch sinuate; lateral borders of hind lobe convex; hind border widely sinuate. Fore disc with 2(1 + 1) large, almost obliterated elevations, and irregularly punctured around them; median sulcus deep, narrow, not reaching collar. Hind disc transversely rugose in middle, finely granulate elsewhere.

Scutellum shorter than width at base (♂ 13:17, ♀ 15:20); lateral borders carinate, straight, apex acute; median carina semiobliterated, extending from basal 1/3 of disc to tip; disc longitudinally rugose anteriorly, concentrically rugose posteriorly.

Hemelytra reaching 3/4 of tergum VII (♂), or hind border of tergum VI (♀); apical angle of corium acute, apical border deeply sinuate.

Abdomen longer than its maximum width across segment V (♂ 49:31, ♀ 57:35); connexiva II and III fused, PE-angles III to VI slightly protruding, exterior borders of connexiva very finely crenulate. Paratergites (♂) small, clavate, reaching 2/3 of hypopygium; the latter cordate, shorter than wide (8:13), with a short, median ridge at base and longitudinal depression on apical 1/2. Paratergites (♀) large, but short, subtriangular, reaching 1/2 of rounded posteriorly segment IX. Spiracles II to V ventral, placed far from border; VI and VII ventral, placed close to border, but not visible from above; VIII lateral and visible from above.

Legs. Femora finely granulate on upper and lower borders, tibiae granulate on upper side.

Color: yellowish brown to pale testaceous, membrane white, hyaline.

Total length: ♂ 3.44, ♀ 5.00 mm; width of pronotum ♂ 1.00, ♀ 1.24 mm; width of abdomen ♂ 1.24, ♀ 1.40 mm.

Holotype ♂ (BISHOP 9014), W. Borneo, Mowong, IX.1907, F. Muir coll.

Allotopotype ♀ (BISHOP), collected with holotype.

Paratypes: 5 ♂♂ & 7 ♀♀, Java, Reban, F. Muir coll.

N. minusculus n. sp. is the smallest of the Oriental species and may be separated by its small size and white membrane.

Neuroctenus gressitti Kormilev, new species Fig. 82.

♀. Macropterous. Elongate ovate, with slightly convex sides; finely and densely granulate.

Head as long as width across eyes (25:25); anterior process robust, strongly constricted laterally, dilated, rounded and incised anteriorly, produced far beyond tip of antennal segment I; antenniferous tubercles strong, blunt, with parallel outer borders. Eyes moderately large, semiglobose. Postocular tubercles small, acute, not reaching outer border of eyes. Vertex convex, densely granulate. Antennae moderately robust, relative length of antennal segments I to IV: 7.5:7.5:8.5:10. Labium reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as its maximum width (22:47.5); fore lobe narrower than hind lobe (40:47.5); anterolateral angles rimmed, very finely serrate and rounded, neither produced anteriorly nor laterally. Lateral notch slightly sinuate; lateral borders of hind lobe convex, rounded; interlobal depression thin and shallow; hind border slightly sinuate; fore and hind disc densely and finely granulate.

Scutellum shorter than its basal width (27:30); lateral borders carinate, disc densely granulate.

Hemelytra reaching hind border of tergum VI; apical angle of corium acute, apical border deeply sinuate interiorly.

Abdomen longer than its maximum width across segment IV (77:57.5); lateral borders slightly convex, rounded and very finely crenulate; connexiva II and III fused; PE-angles II to VI not protruding; PE-VII rounded. Paratergites angularly rounded, produced as far as truncate segment IX, which is short and wide (3:8). Spiracles II to VI ventral, placed far from border, VII ventral, placed close to border, but not visible from above; VIII lateral and visible from above.

Color: ferrugineous; membrane brown, whitish at base; labium and tarsi yellowish brown.

Total length: 6.12 mm; width of pronotum 1.90 mm; width of abdomen 2.30 mm.

Holotype ♀ (BISHOP 9015), Bismarck Arch., New Britain, Malmalwan-Vunakanau, Gazelle Peninsula, 4.V.1956, J. L. Gressitt coll.

It is a pleasure to dedicate this species to Dr J. Linsley Gressitt, Chairman of the Department of Entomology, B. P. Bishop Museum, who collected this, as so many other new species of Aradidae.

Neuroctenus pacificus Usinger, 1946

Neuroctenus pacificus Usinger, 1946, Insects of Guam **2:** 36, f. 4.

DISTRIBUTION: Marianas (Guam).

In the collections of the Bishop Museum there is a series of this species collected in Marianas (Guam), Palau (Koror), Bonin Is. (Chichi Jima), and Philippines (Mindanao).

Neuroctenus sertiventris Kormilev, new species Fig. 83.

♂. Macropterous. Elongate ovate; head, pronotum and scutellum finely granulate; corium scabrous, connexivum very finely punctured.

Head as long as wide across eyes (26:26); anterior process thin, with parallel sides, rounded and slightly incised anteriorly, produced beyond tip of antennal segment I; antenniferous tubercles thin, acute, divergent. Eyes moderately large, semiglobose. Postocular tubercles acute, produced beyond outer border of eyes. Vertex finely granulate, interocular callosities shallow. Antennae thin, relative length of antennal segments I to IV: 8:9:11:12. Labium reaching hind border of labial groove, which is open posteriorly.

Pronotum shorter than its maximum width (25:53); fore lobe narrower than hind lobe (42:53); collar very thin, straight anteriorly; anterolateral angles rounded, produced anteriorly as far as collar; lateral notch sinuate; lateral borders of hind lobe parallel, converging anteriorly. Fore disc with 4(2 + 2) semiobliterated ridges, and with a thin, but deep median sulcus; laterad of sulcus with 2(1 + 1) large, crescent-shaped callosities; hind disc finely granulate; hind border sinuate.

Scutellum shorter than its basal width (25:33); lateral borders carinate, straight, sinuate before apex; the latter angularly rounded. Median carina thin, extending from basal border to tip; disc with transverse, arcuate rows of granules.

Hemelytra reaching 1/2 of tergum VII, apical angle of corium blunt, apical border convex, sinuate interiorly.

Abdomen longer than its maximum width across segment IV (80:63); connexiva II and III completely fused; PE-angles III to VI distinctly protruding, angular; PE-VII slightly produced posteriorly and rounded; exterior borders of connexivum VII sinuate. Paratergites clavate, reaching 3/4 of cordate hypopygium, the latter very finely granulate. Spiracles II to VII ventral, placed far from border; VIII lateral and visible from above.

Color: reddish brown, partially dark brown; membrane dark brown.

Total length: 6.20 mm; width of pronotum 2.12 mm; width of abdomen 2.52 mm.

Holotype ♂ (BISHOP 9016), NW New Guinea, Wisselmeren, Enarotadi, 1850–1900 m, 28.VII. 1962, J. Sedlacek coll.

Paratype: 1 ♂, NW New Guinea, Vogelkop, L. Angi Giji, R. Straatman coll.

Neuroctenus angulatus Matsuda & Usinger, 1957

Neuroctenus angulatus Matsuda & Usinger, 1957, *Ins. Micronesia* **7**(3): 148.

DISTRIBUTION: Marianas (Guam).

In the collections of the Bishop Museum there are a few specimens from Marianas (Guam).

Neuroctenus necopinatus Kormilev, new species Fig. 84–85.

♂. Macropterous. Ovate, very finely granulate.

Head almost as long as wide across eyes (♂ 25:24, ♀ 26:26); anterior process robust, slightly constricted laterally, rounded and declivous anteriorly, reaching slightly beyond tip of antennal segment I; antenniferous tubercles acute, slightly divergent; eyes semiglobose; postocular tubercles acute, reaching, or slightly passing

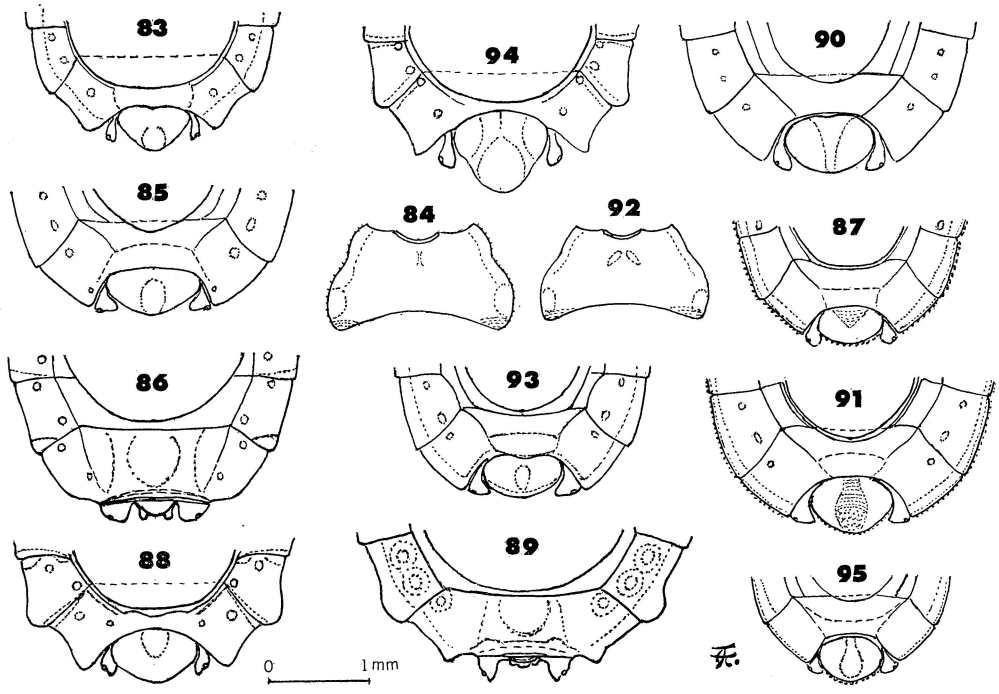


Fig. 83–95. 83, *Neuroctenus sertiventris* n. sp., ♂, tip of abdomen from above; 84, *N. necopinatus* n. sp., ♂, pronotum; 85, same, tip of abdomen from above; 86, *N. hortatrix* n. sp., ♀, tip of abdomen from above; 87, *N. hyalinipennis* n. sp., ♂, tip of abdomen from above; 88, *N. lobuliventris* n. sp., ♂, tip of abdomen from above; 89, same, ♀, tip of abdomen from above; 90, *N. brevirostris* n. sp., ♂, tip of abdomen from above; 91, *N. crassicornis* n. sp., ♂, tip of abdomen from above; 92, *N. pauperulus* n. sp., ♂, pronotum; 93, same, tip of abdomen from above; 94, *N. sedlaceki* n. sp., ♂, tip of abdomen from above; 95, *N. seclusus* n. sp., ♂, tip of abdomen from above.

outer borders of eyes. Vertex finely rugose in arcuate lines. Antennae thin, relative length of antennal segments I to IV: ♂ 8.5:9:12:9, ♀ 9:10:12.5:10. Labium short, reaching line connecting hind borders of eyes.

Pronotum less than 1/2 as long as its maximum width (♂ 18:46, ♀ 20:49); fore lobe narrower than hind lobe (♂ 37: 46, ♀ 38:49); collar deeply sinuate anteriorly, anterior borders laterad of collar sinuate; antero-lateral angles angularly produced anteriorly, rounded exteriorly; lateral notch slightly sinuate; lateral borders of hind lobe convex; hind border widely sinuate; lateral borders finely crenulate. Fore disc flat, scabrous, with a short and thin median sulcus; hind disc finely, transversely rugose; both discs sparsely granulate.

Scutellum shorter than its basal width (♂ 25:32, ♀ 25:35); lateral borders carinate, straight, tip acute; median carina thin, extending from basal 1/3 to tip of disc; the latter obliquely rugose laterad of median carina and sparsely granulate.

Hemelytra reaching over fore border of tergum VII (♂), or reaching it (♀); apical angle of corium acute, apical border widely sinuate.

Abdomen ovate, longer than its maximum width across segment IV (♂ 85:70, ♀ 98:78); lateral borders convex and very finely crenulate; PE-angles II to VI barely protruding, PE-VII angular (♂), or rounded (♀). Paratergites (♂) large, triangular, almost reaching tip of hypopygium, the latter subtriangular, shorter than wide (10:25). Paratergites (♀) large, subtruncate posteriorly, produced 2 × as far as a small, rounded posteriorly segment IX, which is short and wide (2:8). Spiracles II to VII ventral and not visible from above, VIII laterotermina and visible from above. In the postero-exterior angles of connexiva VII are placed 2(1 +

1) small tubercles.

Color: ferrugineous; venter light brown; labium and tarsi yellow.

Total length: ♂ 6.12, ♀ 6.80 mm; width of pronotum ♂ 1.84, ♀ 1.96 mm; width of abdomen ♂ 2.80, ♀ 3.12 mm.

Holotype ♂ (BISHOP 9017), Solomon Is., Guadalcanal, Kiwi Creek, 4.VIII.1944, H. E. Milliron coll.

Allotopotype ♀ (BISHOP), collected with holotype.

Neuroctenus hortatrix Kormilev, new species Fig. 86.

♀. Macropterous. Elongate ovate, lateral borders of abdomen subparallel, slightly convex; connexivum bicolorous; head, pronotum, scutellum, and corium granulate; connexivum punctured.

Head shorter than wide across eyes (27:30); anterior process moderately stout, with parallel sides, rounded and declivous anteriorly, reaching basal 1/3 of antennal segment II; antenniferous tubercles thin, acute, slightly divergent; eyes semiglobose; postocular tubercles tiny, acute, reaching outer borders of eyes; vertex finely granulate. Antennae thin, relative length of antennal segments I to IV: 9:10:13:10. Labium produced beyond fore border of prosternum.

Pronotum short and wide (23:58); fore lobe narrower than hind lobe (45:58); collar sinuate anteriorly; anterolateral angles slightly expanded and reflexed, produced anteriorly beyond collar; lateral notch sinuate; lateral borders of hind lobe parallel, strongly converging anteriorly; hind border almost straight, slightly sinuate. Fore disc with 4(2 + 2) distinct, granulate ridges; hind disc densely and finely granulate.

Scutellum shorter than width at base (25:38); lateral borders carinate and slightly sinuate in middle, convex near apex; latter angularly rounded. Median carina thin, extending from basal border to tip; disc finely granulate.

Hemelytra almost reaching hind border of tergum VI; apical angle of corium blunt, apical border straight, deeply sinuate interiorly.

Abdomen ovate, longer than its maximum width across segment IV (85:72); lateral borders convex, rounded; PE-angles II to VI barely protruding, blunt; PE-VII rounded. Paratergites large, rounded posteriorly, very slightly produced beyond tip of segment IX, which is incised posteriorly. Spiracles II to VII ventral, placed far from border, VIII lateral and visible from above.

Color: black; posterior borders of connexiva II to VI yellow; membrane black, whitish at base.

Total length: 6.60 mm; width of pronotum 2.32 mm; width of abdomen 2.88 mm.

Holotype ♀ (BISHOP 9018), NE New Guinea, Mt Kaindi, 2350 m, 24.III.1966, J. L. Gressitt coll.

Neuroctenus taiwanicus Kormilev, 1955

Neuroctenus taiwanicus Kormilev, 1955, *Mushi* **28**(4): 39, fig. 11–14.

DISTRIBUTION: Taiwan and Hainan.

In the colletions of the Bishop Museum there are large series of this species from Taiwan and S. China (Hainan).

Neuroctenus flavosuturatus Bloete, 1965

Neuroctenus flavosuturatus Bloete, 1965, *Zool. Verh.* **75:** 19, fig. 15–17.

♂. Macropterous. Elongate ovate; head, pronotum and scutellum granulate.

Head longer than wide across eyes (♂ 31:29, ♀ 38:35); anterior process tapering and very slightly incised anteriorly, reaching beyond tip of antennal segment I; antenniferous tubercles acute, divaricating; postocular small, acute, reaching, or slightly passing, outer borders of eyes; vertex granulate. Antennae thin, relative length of antennal segments I to IV: ♂ 13:13:15:14, ♀ 12:12:14:– (IV missing); labium reaching hind border of labial groove.

Pronotum less than 1/2 as long as wide (♂ 26:62, ♀ 32:73); fore lobe narrower than hind lobe (♂ 47:62, ♀ 57:73); anterolateral angle expanded, rounded and produced anteriorly beyond collar; lateral notch sinuate; lateral borders of hind lobe parallel, converging anteriorly. Fore disc with a thin median carina placed in

median sulcus, and laterad of it with 4 (2 + 2) ridges; interlobal depression narrow and deep; hind border convex medially and laterally, sinuate laterad of middle.

Scutellum shorter than basal width (♂ 36:37, ♀ 40:47); lateral borders straight, convex at tip; disc roughly punctured and sparsely granulate; median carina in shape of "Cross of Lorraine."

Hemelytra reaching almost to hind border of tergum VII (♂), or tergum VI (♀); apical angle of corium acute, apical border twice sinuate.

Abdomen longer than its maximum width across segment IV (♂ 97:78, ♀ 117:107); lateral borders evenly convex from II to VI, sinuate at VII; PE-angles II to V not protruding, PE-VI rounded, more in ♂; PE-VII forming longer (♂), or shorter (♀), divergent, rounded lobes. Paratergites (♂) long, subcylindrical, reaching 3/4 of hypopygium; latter cordate, shorter than wide (22:29), squarely depressed in middle at base. Paratergites (♀) subtriangular, rounded apically, 2 × as long as segment IX, which is tricuspidate. Spiracles II to VI ventral, placed far from border, VII ventral, placed close to border, VIII lateral.

Color: ferrugineous; hind borders of connexiva II to VI yellow, base of membrane whitish.

Total length: ♂ 7.30, ♀ 7.80 mm; width of pronotum ♂ 2.21, ♀ 2.61 mm; width of abdomen ♂ 2.78, ♀ 3.82 mm.

Holotype ♂ (Rijksmuseum van Natuurlijke Historie, Leiden), NW New Guinea, Mist Camp, 1800 m, 11.I.1939, L. J. Toxopeus coll., Netherlands Indian-American New Guinea expedition.

Allotopotype ♀, collected with the holotype.

Neuroctenus serrulatus Stål, 1870 Fig.194–195.

Neuroctenus serrulatus Stål, 1870, *Oefv. Sv. Vet. Ak. Forh.* **27:** 674.

By the kind office of Dr Per Inge Persson, of the Naturhistoriska Riksmuseum, Stockholm, I have had the privilege of examining the original series, which Stål used to establish *N. serrulatus*. In this series are 4 specimens from the Semper Philippine collection; a 5th, labeled "Manilla," Thorey, and with a small label in the hand of Stål "serrulatus," probably does not belong to the former collection. The four specimens from the Semper collection represent 2 different species: 1 with corium coriaceous and segment IX (♀) narrower than paratergites, and another, with corium hyaline, transparent, and segment IX as wide as paratergites. Bergroth indicated the last species as var. b. (1887: 179). The 5th specimen, with the label "serrulatus" by Stål, belongs to the former. To fix "serrulatus," it was necessary to select a lectotype, for which I took a ♀ from the 1st species in the Semper collection (all 5 specimens are ♀'s). The 2nd species, with a hyaline corium, I propose to name *Neuroctenus hyalinipennis* n. sp.

Examining the specimens identified by Bergroth as *N. serrulatus*, and also by me in 1952 and 1964 as *N. serrulatus*, I see that among them are represented both *N. serrulatus* Stål, and *N. hyalinipennis* n. sp., and besides them are 3 specimens from Australia, Queensland, which have a coriaceous corium, but the genital segments of both ♂ and ♀ correspond to *N. hyalinipennis*, and not to *serrulatus* Stål; so I propose to name the latter *Neuroctenus hyalinipennis australicus* n. ssp. The hyaline corium is certainly a secondary modification, and the subspecies *australicus* surely represents the older, original species, from which *hyalinipennis* developed with a transparent, hyaline corium. One specimen of *N. hyalinipennis* from Misima I. (Papua) has the corium only translucent, not transparent, representing the transition from the coriaceous to the hyaline corium.

A short description of the lectotype of *Neuroctenus serrulatus* Stål, 1870 follows.

♀. Macropterous. Ovate; corium coriaceous, lateral borders of abdomen roughly crenulate.

Anterior process of head reaching tip of antennal segment I; antenniferous tubercles acute, with parallel outer borders; postocular acute, with very small teeth anteriorly. Labium short, reaching a line connecting hind borders of eyes. Anterolateral angles of pronotum rounded, slightly expanded; lateral borders barely sinuate medially. Abdomen ovate; lateral borders with a double row of small teeth, a 3rd row along border at a certain distance. Paratergites truncate posteriorly and serrate, wider than segment IX (9:7), the latter

rounded posteriorly. Paratergites (♂) reaching or almost reaching tip of hypopygium, latter small, rounded posteriorly, without any median ridge.

Measurements: head ♀ 23:24, relative length of antennal segments I to IV: 8:9:10.5:9.5; pronotum 20:49, fore lobe narrower than hind lobe 42:49; scutellum 26:35; abdomen 100:80.5 across segment IV; hypopygium (♂) 8:16.

Color: testaceous, membrane hyaline, transparent.

Total length: ♀ 6.88, ♂ 5.24 mm.

LECTOTYPE ♀ (Naturhistoriska Riksmuseum, Stockholm), Philippines, Semper coll.

Cotypes: 1 ♀, collected with lectotype; 1 ♀, Philippines, Manilla, with label of Stål "serrulatus."

Neuroctenus hyalinipennis Kormilev, new species. Fig. 87, 196.

♂. Macropterous. Hemelytra hyaline, transparent, veins of corium opaque, yellow.

Anterior process of head reaching 4/5 of antennal segment I; antenniferous tubercles acute, with parallel outer border; postocular acute, almost reaching outer border of eyes. Labium reaching a line connecting hind borders of eyes. Anterolateral angles of pronotum rounded, lateral borders almost straight medially, convex at humeri. Abdomen narrower than in *N. serrulatus* Stål, and teeth on border finer. Paratergites (♂) reaching 2/3 of hypopygium, the latter rounded posteriorly, with a flat ovate median ridge extending from base to tip. Paratergites (♀) truncate posteriorly, as long and as wide as segment IX.

Measurements: head ♂ 20:21, ♀ 20:21; relative length of antennal segments I to IV: ♂ 8:7.5:9:8, ♀ 7.5:7.5:10:9; pronotum ♂ 16:41, ♀ 16:42.5; fore lobe narrower than hind lobe ♂ 32:41, ♀ 33:42.5; scutellum ♂ 19:28, ♀ 20:30; abdomen ♂ 66:53, ♀ 71:57, both across segment IV; hypopygium 11:20.

Color: ferrugineous, partially piceous; hemelytra hyaline with yellow veins.

Total length: ♂ 5.00, ♀ 5.28 mm; width of pronotum ♂ 1.64, ♀ 1.70 mm; width of abdomen ♂ 2.12, ♀ 2.28 mm.

Holotype ♂ (U. S. National Museum, Washington, D. C.), Engano I., Malaconni VI, Modigliani coll., ex Montandon collection, with label of Bergroth: "N. serrulatus det. Bergroth."

Allotype ♀ (Naturhistoriska Riksmuseum, Stockholm), Philippines, Leyte, Semper coll.

Paratypes: 1 ♀, collected with allotype, (Stockholm); 1 ♂ & 1 ♀, Java, W, Gg Malang, 1260 m (4200′); M. E. Walsh coll. ex Kormilev collection (USNM).

1 ♀, from Papua, Misima I., Rev. Bartlett coll., ex Kormilev coll. (USNM) was not made a paratype.

Neuroctenus hyalinipennis australicus Kormilev, new subspecies Fig. 197.

♂. Macropterous. Corium coriaceous.

Similar to *N. h. hyalinipennis* n. sp.; the main difference is in the corium, which is coriaceous.

Measurements: head ♂ 17.5:20, ♀ 19:21; relative length of antennal segments I to IV: ♂ 7.5:7:8.5:8, ♀ 7.5:7:9:7.5; pronotum ♂ 16:40, ♀ 16:43; fore lobe narrower than hind lobe ♂ 33:40, ♀ 35:43; scutellum ♂ 19:28, ♀ 20:30; abdomen ♂ 75:56, ♀ 80:59; hypopygium 12:20.

Color: ferrugineous, membrane hyaline, transparent.

Total length: ♂ 5.28, ♀ 5.52 mm; width of pronotum ♂ 1.60, ♀ 1.72 mm; width of abdomen ♂ 2.24, ♀ 2.36 mm.

Holotype ♂ (U. S. National Museum, Washington, D. C.), Australia, Queensland, Cairns, Mjoberg coll., ex Kormilev collection.

Allotopotype ♀ (USNM) collected with holotype; 1 ♂ paratype (USNM), Australia, Queensland, Kuranda, F. P. Dodd coll.

Neuroctenus lobuliventris Kormilev, new species Fig. 88–89.

♂. Macropterous. Ovate, lateral borders of abdomen slightly convex from II to V, slightly sinuate on VI, more so on VII (♂), only on VII (♀).

Head slightly longer than width across eyes (♂ 27.5:26, ♀ 28:26); anterior process tapering and rounded

anteriorly, not incised, reaching, or slightly passing tip of antennal segment I; antenniferous tubercles acute, almost spiniform; postocular acute, reaching, or slightly passing outer borders of eyes. Antennae relatively long, relative length of antennal segments I to IV: ♂ 10:11:14:12.5, ♀ 10:11:15:12. Labium reaching hind border of labial groove.

Pronotum less than 1/2 as long as its maximum width (♂ 22:54, ♀ 25:59); fore lobe narrower than hind lobe (♂ 43:54, ♀ 45:59); anterolateral angles moderately expanded, rounded and produced slightly beyond collar; lateral borders of hind lobe parallel, converging anteriorly; fore lobe with 4(2 + 2) well developed ridges, particularly the inner ones, which are rounded and high; median sulcus between them narrow and deep.

Scutellum shorter than its width at base (♂ 27:33, ♀ 29:39); median carina very thin, linear on basal 1/3 of disc, then wider.

Hemelytra reaching 1/2 of tergum VII (♂), or slightly produced over fore border of tergum VII (♀); apical angle of corium acute, apical border straight exteriorly, sinuate interiorly.

Abdomen ovate, longer than its maximum width across segment IV (♂ 80:70, ♀ 91:80); PE-angles III to V slightly protruding, PE-VI more protruding and rounded, PE-VII forming rounded lobes in both sexes. Paratergites (♂) clavate, reaching almost to tip of hypopygium, the latter subcordate, deeply depressed in middle of base; paratergites (♀) long, triangular, produced far beyond tip of segment IX. Spiracles II to VI ventral, placed far from border, VII ventral, but placed near border, though not visible from above; VIII lateral and visible from above.

Color: ferrugineous; hind borders of connexiva II to VI, and fore border of VII, yellow; labium and tarsi yellow brown.

Total length: ♂ 6.40, ♀ 7.00 mm; width of pronotum ♂ 2.16, ♀ 2.36 mm; width of abdomen ♂ 2.80, ♀ 3.20 mm.

Holotype ♂ (BISHOP 9019), NE New Guinea, Mt Missim, 2400 m, 24.IV.1968, J. L. Gressitt coll.

Allotype ♀ (BISHOP), same locality, 2100 m, 15.III.1968, P. Colman coll.

Paratypes: 6 ♂♂ & 4 ♀♀, W, NE New Guinea, Papua, various collectors.

Neuroctenus sedlaceki Kormilev, new species Fig. 94.

♂. Macropterous. Closely related to *N. sertiventris* n. sp., but slightly larger; anterior process of head only reaching tip of antennal segment I; antenniferous tubercles acute, diverging; postocular also acute, produced beyond outer border of eyes; labium reaching hind border of labial groove. Anterolateral angles of pronotum angularly rounded, lateral borders of fore lobe convex, lateral notch distinct, lateral borders of hind lobe parallel, roundly converging anteriorly. Fore lobe with 4(2 + 2) distinct ridges. Scutellum with lateral borders straight and carinate, convex near tip; median carina thin anteriorly and posteriorly, dilated medially; disc granulate. Abdomen with lateral borders slightly convex from II to VI, deeply sinuate on VII; PE-angles II to V barely protruding, VI forming rounded lobes, VII produced backward as rounded lobes. Paratergites clavate, reaching 3/4 of hypopygium; the latter pear-shaped, depressed in middle near base. Spiracles II to VI ventral, placed far from border; VII ventral, placed close to border, though not visible from above; VIII lateral and visible from above.

Measurements: head 25:25, relative length of antennal segments I to IV: 10:11:13:13; pronotum 23:55; ratio width of fore lobe/width of hind lobe 42:55; scutellum 27.5:35; abdomen 83:67.5; hypopygium 18:24.

Color: piceous; hind borders of connexiva II to VI, and fore borders of IV to VII, reddish brown, or yellow brown; venter, trochanters, labium and tarsi ferrugineous.

Total length: 6.40 mm; width of pronotum 2.20 mm; width of abdomen 2.70 mm.

Holotype ♂ (BISHOP 9020), NW New Guinea, Wisselmeren, Enarotadi, 1850–2050 m, 5–6. VIII.1962, J. Sedlacek coll.

It is a pleasure to dedicate this species to its collector, Mr Josef Sedlacek.

Neuroctenus brevirostris Kormilev, new species Fig. 90.

♂. Macropterous. Elongate ovate, widening backward until segment V, then narrowing again; lateral borders of pronotum and abdomen very finely crenulate; femora roughly denticulate inferiorly.

Head as long as wide across eyes (23:23); anterior process moderately stout, slightly tapering anteriorly, there rounded and incised, reaching 4/5 of antennal segment I; antenniferous tubercles acute, slightly diverging; postocular small, acute, slightly distant from eyes, reaching outer borders of the latter; between eyes and postocular tubercles are placed 2–3 small granules. Vertex finely granulate. Antennae thin, relative length of antennal segments I to IV: 11:10:12.5:11. Labium very short, not reaching line connecting hind borders of eyes.

Pronotum less than 1/2 as long as its maximum width (20:51); fore lobe narrower than hind lobe (44:51); collar prominent, slightly sinuate anteriorly; anterolateral angles slightly expanded and angularly produced anteriorly slightly passing collar; lateral notch sinuate; lateral borders of hind lobe convex, converging anteriorly and posteriorly; hind border widely sinuate. Fore disc with a short median sulcus, scabrous; hind disc very finely and sparsely granulate.

Scutellum shorter than width at base (30:35); lateral borders carinate, straight; tip acute. Median carina low, extending from basal 1/3 to tip of disc; latter longitudinally rugose on basal 1/3, transversely rugose on apical 2/3.

Hemelytra reaching slightly over fore border of tergum VII; apical angle of corium acute, apical border twice sinuate.

Abdomen longer than its maximum width across segment V (95:73); lateral borders convex; PE-angles III to VI protruding, angular; PE-VII forming almost a right angle. Paratergites clavate, almost reaching tip of hypopygium; the latter shorter than wide (15:24), evenly rounded posteriorly, disc slightly depressed medially. Spiracles II to VII ventral, placed far from border; VIII lateral and visible from above.

Color: dark ferrugineous, partially infuscate; membrane hyaline, with black nerves and infuscate in middle.

Total length: 6.80 mm; width of pronotum 2.04 mm; width of abdomen 2.52 mm.

Holotype ♂ (BISHOP 9021), NW New Guinea, Waris, S. of Hollandia, 450–500 m, 1–17.VIII. 1959, T. C. Maa coll.

Neuroctenus pauperulus Kormilev, new species Fig. 92–93.

♂. Macropterous. Related to *N. necopinatus* n. sp., but smaller and narrower; anterior process of head reaching tip of antennal segment I; postocular tubercles longer, slightly produced beyond outer borders of eyes; eyes relatively smaller. Anterolateral angles of pronotum slightly, angularly produced anteriorly; lateral notch barely sinuate; pronotum, scutellum, and particularly abdomen narrower, and connexivum VII without small tubercles in postero-exterior angles. Spiracles II to VII ventral, placed far from border; VIII latero-terminal. Labium longer, slightly produced beyond a line connecting hind borders of eyes.

Measurements: head 20:22; relative length of antennal segments I to IV: 8:7.5:10:8; pronotum 17:42, ratio width of fore lobe/width of hind lobe 32.5:42; scutellum 24:28; abdomen 80:62 across segment IV; hypopygium 10:19.

Color: ferrugineous, partially infuscate; ventral side yellowish brown in middle.

Total length: 5.64 mm; width of pronotum 1.68 mm; width of abdomen 2.48 mm.

Holotype ♂ (CAS), NE New Guinea, Finschhafen, 7.V.1944, E. S. Ross coll.

Neuroctenus crassicornis Kormilev, new species Fig. 91.

♂. Macropterous. Elongate ovate, finely granulate; lateral borders of pronotum and abdomen very finely serrate.

Head as long as width across eyes (25:25); anterior process robust, slightly constricted laterally, rounded and incised, reaching tip of antennal segment I; antenniferous tubercles acute, with subparallel and finely crenulate sides; postocular small, acute, slightly produced beyond outer border of eyes. Eyes moderately large, semiglobose; vertex transversely rugose; infraocular callosities narrow and deep. Antennae stout, rela-

tive length of antennal segments I to IV: ♂ 8:10:12.5:9, ♀ 9:11:13.5:10; labium short, reaching a line connecting hind borders of eyes.

Pronotum less than 1/2 as long as its maximum width (♂ 18:45, ♀ 20:50); fore lobe narrower than hind lobe (♂ 38:45, ♀ 43:50); collar thin, deeply sinuate anteriorly; anterolateral angles angularly rounded, produced anteriorly beyond collar, laterally distinctly serrate; lateral borders of hind lobe convex, rounded, also serrate. Fore disc with 2(1 + 1) narrow, low ridges along lateral borders; median sulcus thin, disc laterad of it granulate; hind disc transversely rugose in middle.

Scutellum shorter than basal width (♂ 25:32, ♀ 30:35); lateral borders carinate, very slightly convex, tip acute; disc longitudinally striate on basal 1/3, transversely rugose on apical 2/3.

Hemelytra reaching slightly over fore border of tergum VII (♂), or reaching 2/3 of tergum VI (♀); apical angle of corium acute, apical border widely sinuate.

Abdomen ovate, longer than its maximum width across segment IV (♂ 90:71, ♀ 104:81); lateral borders convex, rounded and crenulate; PE-angles not protruding, PE-VII forming a right angle; connexiva III to VII with a granulate carina along outer border. Paratergites (♂) subtriangular, rounded posteriorly, almost reaching tip of hypopygium; the latter small, rounded posteriorly, with a low and wide median ridge, and roughly granulate laterally. Paratergites (♀) truncate and serrate posteriorly, wider than small rounded posteriorly segment IX (10:8). Spiracles II to VII ventral, distant from border, VIII latero-terminal. Hypopygium shorter than wide (13:20).

Color: ferrugineous; membrane black, lighter at base; labium and tarsi yellowish brown.

Total length: ♂ 6.44, ♀ 7.28 mm; width of pronotum ♂ 1.80, ♀ 2.00 mm; width of abdomen ♂ 2.84, ♀ 3.24 mm.

Holotype ♂ (BISHOP 9023), SE New Guinea, Papua, W. District, Oriomo Govt. Sta., 26–28. X.1960, J. L. Gressitt coll.

Allotopotype ♀ (BISHOP), collected with holotype.

Paratypes: 13 ♂♂ & 9 ♀♀, collected with holotype; 3 ♂♂ & 2 ♀♀, Philippines, Mindanao, Zamboanga del Sur, Lemesaban, 600 m, 7.IX.1958, H. E. Milliron coll.; 4 ♀♀, SE New Guinea, Brown R., 23.X.1960, J. L. Gressitt coll.; 1 ♀, NW New Guinea, Waris, S. of Hollandia, 8–15.VIII. 1959, T. C. Maa.

Neuroctenus fulgidus Kormilev, new species Fig. 96–98.

♂. Macropterous. Elongate ovate, very finely granulate, connexivum very finely punctured.

Related to *N. crassicornis* n. sp., but smaller, antennae thinner; lateral borders of pronotum and abdomen very finely serrate; hypopygium relatively shorter; paratergites (♀) obliquely subtruncate posteriorly, produced far beyond small, posteriorly excavated segment IX.

Anterior process of head reaching tip of antennal segment I; postocular tubercles slightly produced beyond outer borders of eyes; lateral borders of pronotum slightly sinuate. Paratergites (♂) almost reaching tip of hypopygium. Spiracles II to VII ventral, distant from border; VIII latero-terminal. Labium short, slightly produced beyond a line connecting hind borders of eyes.

Measurements: head ♂ 23:23, ♀ 23:24; relative length of antennal segments I to IV: ♂ 8:9:11:9.5, ♀ 8:8:10:8.5; pronotum ♂ 16:43, ♀ 17.5:43; ratio width of fore lobe/width of hind lobe: ♂ 35:43, ♀ 35:43; scutellum ♂ 22:30, ♀ 24:31; abdomen ♂ 82:65, ♀ 85:65, both across segment IV; hypopygium 11:20; segment IX 2:7, paratergites (♀) wide 9.

Color: dark ferrugineous; membrane black; labium and tarsi yellowish brown.

Total length: ♂ 5.88, ♀ 6.00 mm; width of pronotum ♂ 1.72, ♀ 1.72 mm; width of abdomen ♂ 2.60, ♀ 2.60 mm.

Holotype ♂ (BISHOP 9024), Solomon Is., Malaita, Auki, 20 m, 1–2.VI.1964, J. Sedlacek coll.

Allotopotype ♀ (BISHOP), same locality, 30 m, 2.VI.1964, J. & M. Sedlacek coll.

Paratypes: 4 ♂♂, Solomon Is., Florida Group, Hanavaivina, 30.IX.1960, C. W. O'Brien coll.; 1 ♂ & 2 ♀♀ + 2 nymphs, Solomon Is., Malaita, 3 km N of Auki, 20 m, 1–2.VI.1964, J. Sedlacek coll.

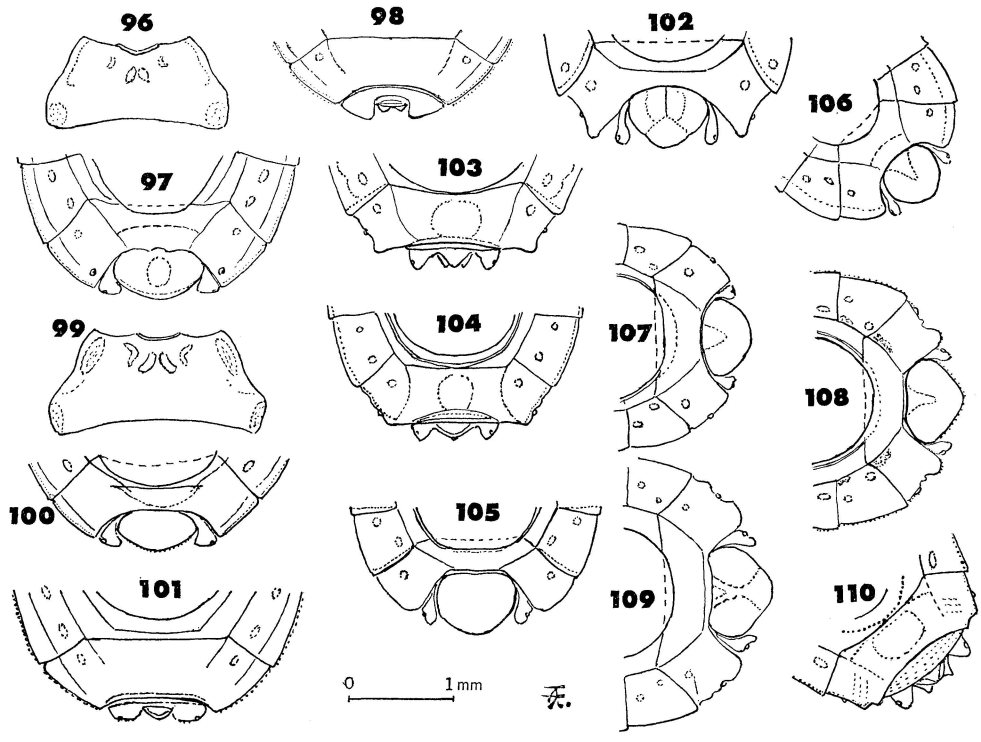


Fig. 96–110. 96, *Neuroctenus fulgidus* n. sp., ♂, pronotum; 97, same, tip of abdomen from above; 98, same, ♀, tip of abdomen from above; 99, *N. foratus* n. sp., ♂, pronotum; 100, same, tip of abdomen from above; 101, same, ♀, tip of abdomen from above; 102, *N. acutus* n. sp., ♂, tip of abdomen from above; 103, *N. incautus* n. sp., ♀, tip of abdomen from above; 104, *N. morio* n. sp., ♀, tip of abdomen from above; 105, *N. granuliger* n. sp., ♂, tip of abdomen from above; 106, *N. dybasi* n. sp., ♂, tip of abdomen from above; 107, *N. muiri* n. sp., ♂, tip of abdomen from above; 108, *N. millironi* n. sp., ♂, tip of abdomen from above; 109, *N. eurycephalus* n. sp., ♂, tip of abdomen from above; 110, *N. javanicus* Bloete, 1965, ♀, tip of abdomen from above.

Neuroctenus seclusus Kormilev, new species Fig. 95.

♀. Macropterous. Elongate ovate, very finely granulate; lateral borders of pronotum and abdomen distinctly serrate; connexivum finely punctured.

Also closely related to *N. crassicornis* n. sp., but smaller, antennae thinner, antenniferous tubercles more divergent, acute; hemelytra longer, reaching hind border of tergum VI (♀), or slightly passing it (♂); paratergites (♀) narrower, as wide as segment IX (8:8); hypopygium (♂) relatively shorter.

Anterior process of head reaching tip of antennal segment I; postocular tubercles produced beyond outer borders of eyes, their fore border serrate; vertex transversely rugose. Paratergites (♀) truncate and serrate posteriorly. Spiracles II to VII ventral, placed far from border, VIII latero-terminal. Labium reaching line connecting hind borders of eyes.

Measurements: head ♀ 23:24, ♂ 21:21; relative length of antennal segments I to IV: ♀ 9:7.5:10:9, ♂ 8:7:–:– (last 2 missing); pronotum ♀ 18:45, ♂ 16:39; ratio width of fore lobe/width of hind lobe ♀ 38:45, ♂ 34:39; scutellum ♀ 24:30, ♂ 20:26; abdomen ♀ 83:64, ♂ 72:52, both across segment IV; hypopygium 9:16; segment IX 3:8; paratergites (♀) wide 8.

Color: ferrugineous, or testaceous (immature ?); membrane black, whitish at base; labium and tarsi yellow.

Total length: ♀ 5.92, ♂ 5.24 mm; width of pronotum ♀ 1.80, ♂ 1.56 mm; width of abdomen ♀ 2.56, ♂ 2.08 mm.

Holotype ♀ (BISHOP 9025), Bismark Arch., New Ireland, SW, Ridge above "Camp Bishop," 15 km up Kait R., 250–500 m, 11.VI.1956, J. L. Gressitt coll.

Allotopotype ♂ (BISHOP), collected with holotype.

Paratypes: 8 ♂♂ & 5 ♀♀, from New Ireland, 1 ♀, from New Britain, and 10 ♂♂ & 4 ♀♀, from New Guinea (W, NE).

Neuroctenus foratus Kormilev, new species Fig. 99–101.

♂. Macropterous. Elongate ovate, finely granulate; lateral borders of pronotum and abdomen distinctly serrate.

Head as long as width across eyes (♂ 25:25, ♀ 26:26); anterior process robust, rounded and slightly incised anteriorly, reaching 3/4 of antennal segment I; antenniferous tubercles small, acute, slightly diverging; postocular small, acute, reaching outer border of eyes. Eyes moderately large, semiglobose. Vertex granulate, infraocular callosities deeply depressed. Antennae thin, relative length of antennal segments I to IV: ♂ 10:10:12:11, ♀ 10:10:12.5:11.5; labium short, reaching a line connecting hind borders of eyes.

Pronotum shorter than its maximum width (♂ 21:50, ♀ 22:53); fore lobe narrower than hind lobe (♂ 38:50, ♀ 42:53); collar thin, deeply sinuate interiorly; anterior borders laterad of collar sinuate; anterolateral angles angularly rounded, produced anteriorly as far as collar; lateral notch sinuate, lateral borders of hind lobe convex, converging anteriorly and posteriorly; hind border widely sinuate. Fore lobe with 4(2 + 2) callosities, and laterad of them with 2(1 + 1) granulate ridges. Hind disc finely granulate.

Scutellum shorter than its basal width (♂ 25:32, ♀ 28:35); lateral borders carinate, slightly sinuate before apex; latter rounded; median carina thin and low, extending from basal 1/3 of disc to apex; basal 1/3 of disc granulate, apical 2/3 transversely rugose.

Hemelytra reaching middle of tergum VII (♂), or 2/3 of tergum VI (♀); apical angle of corium acute, apical border twice, shallowly sinuate; veins of corium granulate.

Abdomen ovate, longer than width across segment IV (♂ 88:69, ♀ 100:75); lateral borders convex, PE-angles II to VI not protruding, PE-VII forming a right angle. Paratergites (♂) triangular, rounded posteriorly, reaching almost to tip of hypopygium; the latter much shorter than wide (11:18), evenly rounded posteriorly. Paratergites (♀) truncate and serrate posteriorly, as long as, but wider than, segment IX. Spiracles II to VII ventral, placed far from border, VIII latero-terminal and visible from above. Connexiva II and III semifused.

Color: dark ferrugineous; membrane whitish at base, tarsi yellowish brown.

Total length: ♂ 6.24, ♀ 7.00 mm; width of pronotum ♂ 2.00, ♀ 2.12 mm; width of abdomen ♂ 2.76, ♀ 3.00 mm.

Holotype ♂ (BISHOP 9026), Sabah (N Borneo), Tenompok, 1460 m, 48 km E of Jesselton, 2–4. II.1959, T. C. Maa coll.

Allotopotype ♀ (BISHOP), collected with holotype.

Paratypes: 11 ♂♂ & 13 ♀♀, collected with holotype; 23 ♂♂ & 17 ♀♀, 10 km N of Jesselton, T. C. Maa coll.

N. foratus n. sp. is also closely related to *N. crassicornis* n. sp., but may be separated from it by the thinner antennae, and the smaller and shorter hypopygium.

Neuroctenus variegatus Matsuda & Usinger, 1957

Neuroctenus variegatus Matsuda & Usinger, 1957, *Ins. Micronesia* **7**(3): 149.

DISTRIBUTION: Marianas (Guam).

In the collections of the Bishop Museum there are a few specimens also from Guam.

Neuroctenus granuliger Kormilev, new species Fig. 105.

♂. Macropterous. Elongate ovate, finely and densely granulate; lateral borders of pronotum and

abdomen very finely serrate.

Head shorter than width across eyes (23:25); anterior process strongly constricted laterally, widening, rounded and incised anteriorly, reaching far beyond tip of antennal segment I; antenniferous tubercles blunt and strongly diverging; postocular spine tiny, acute, placed distant from eyes, reaching outer borders of the latter. Eyes semiglobose. Vertex with transverse rows of fine granules. Antennae thin, relative length of antennal segments I to IV: 7.5:7.5:9.5:9.5. Labium reaching hind border of labial groove, which is closed posteriorly; laterad of labial groove transversely rugose.

Pronotum less than 1/2 as long as maximum width (19:46); fore lobe narrower than hind lobe (38:46); anterolateral angles slightly expanded and rounded, neither produced anteriorly, nor laterally; lateral notch distinct, angular; lateral borders of hind lobe subparallel, converging anteriorly; hind border slightly sinuate. Disc densely granulate and twice (1 + 1) depressed laterad of middle.

Scutellum shorter than basal width (21:30); lateral borders carinate, straight; tip rounded; disc longitudinally rugose at base, granulate elsewhere; median carina thin.

Hemelytra reaching over fore border of tergum VII; apical angle of corium narrowly rounded, apical border sinuate interiorly.

Abdomen longer than its width across segment IV (70:59); connexiva II and III fused; PE-angles barely protruding; PE-VII rounded. Paratergites long, not reaching tip of hypopygium; latter rounded posteriorly, slightly inflated and finely granulate on disc.

Color: dark brown; expansions of anterolateral angles of pronotum, hind borders and round callous spots on connexiva and midlateral areas reddish brown; hind borders of prosternum, coxae and venter light ferrugineous; labium and tarsi brown.

Total length: 5.50 mm; width of pronotum 1.84 mm; width of abdomen 2.36 mm.

Holotype ♂ (BISHOP 9027), NE New Guinea, Wau, 1200 m, 24.XII.1965, J. & M. Sedlacek coll. (Malaise trap).

Neuroctenus acutus Kormilev, new species Fig. 102.

♂. Macropterous. Elongate ovate, very finely granulate; connexivum bicolorous.

Head as long as width across eyes (♂ 27:27, ♀ 27.5:27.5); anterior process slightly produced beyond tip of antennal segment I; postocular tubercles reaching outer borders of eyes. Antennae slender, relative length of antennal segments I to IV: ♂ 9:9:12.5:10, ♀ 10:9.5:12.5:12; labium reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as maximum width (♂ 20:51, ♀ 21:55); fore lobe narrower than hind lobe (♂ 43:51, ♀ 43:55); anterolateral angles expanded and rounded, produced forward beyond collar; lateral borders of hind lobe parallel posteriorly, widening anteriorly, there rounded, forming lobes, then convergent; in ♀ lobes are less developed; fore lobe with 4(2 + 2) prominent ridges; hind disc granulate.

Scutellum shorter than its basal width (♂ 23:32, ♀ 28:33); lateral borders straight, carinate, convex before apex; latter angular; median carina thin, disc densely punctured.

Hemelytra reaching middle of tergum VII (♂), or 3/4 of tergum VI (♀); apical angle of corium acute, apical border twice shallowly sinuate.

Abdomen longer than maximum width across segment IV (♂ 75:65, ♀ 90:70); PE-angles slightly protruding; PE-VII produced posteriorly as narrowly rounded lobes (♂), or shorter, rounded lobes (♀). Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above. Paratergites (♂) reaching tip of hypopygium; the latter narrowly rounded posteriorly and shallowly depressed at base. Paratergites (♀) triangular, almost 2 × as long as small, tricuspidate segment IX.

Color: black to piceous; bases of antennal segments, and sometimes expanded portions of anterolateral angles of pronotum and hind borders of connexiva II to VI reddish brown or yellow.

Total length: ♂ 5.88, ♀ 6.72 mm; width of pronotum ♂ 2.04, ♀ 2.20 mm; width of abdomen ♂ 2.60, ♀ 2.80 mm.

Holotype ♂ (BISHOP 9028), NE New Guinea, Purosa, 20–26 km SE of Okapa, 1800–2020 m, 28.VIII.1964, J. & M. Sedlacek coll.

Allotype ♀ (BISHOP), NW New Guinea, Bokondini, 40 km N of Baliem Val., 1300 m, 16–23.XI.1961, L. W. Quate coll.

Paratopotype: 1 ♀, NE New Guinea, E Highland, Purosa, 1700 m, 17–25.V.1966, J. L. Gressitt & Tawi coll.

Neuroctenus incautus Kormilev, new species Fig. 103.

♀. Macropterous. Elongate ovate, with subparallel, slightly convex sides, finely granulate.

Head shorter than width across eyes (23:25); anterior process long and narrow, with parallel sides, slightly incised anteriorly, reaching basal 1/4 of antennal segment II; antenniferous tubercles thin, acute, diverging; postocular spine tiny, acute, not reaching outer borders of eyes. Eyes semiglobose, protruding. Vertex finely granulate. Antennae thin, relative length of antennal segments I to IV: ♀ 8:8:11:10; labium reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as wide (22:53); fore lobe narrower than hind lobe (41:53); collar slightly sinuate anteriorly, anterolateral angles slightly expanded and produced anteriorly beyond collar and laterally; lateral notch distinctly sinuate; lateral borders of hind lobe parallel, converging anteriorly; hind border weakly sinuate. Fore disc with 4(2 + 2) low, granulate ridges; interlobal depression very thin, sulcus-like; hind disc densely and finely granulate.

Scutellum shorter than basal width (27:35); lateral borders carinate, slightly sinuate near apex; the latter subangular; median carina thin and low, laterad of it disc is granulate, granules arranged in arcuate, transverse rows.

Hemelytra reaching hind border of tergum VI; apical angle of corium blunt, apical border twice sinuate.

Abdomen longer than width across segment IV (78:63); lateral borders parallel from II to V, then converging; connexiva II and III fused: PE-angles III to VI barely protruding, PE-VII forming small, rounded, diverging lobes. Paratergites conical, blunt, reaching tip of a small, tricuspidate segment IX. Spiracles II to VI ventral, distant from border, VII and VIII lateral and visible from above.

Color: piceous, partially ferrugineous; hind borders of connexiva III to VI yellow; labium and tarsi brown.

Total length: 6.00 mm; width of pronotum 2.12 mm; width of abdomen 2.52 mm.

Holotype ♀ (BISHOP 9029), NE New Guinea, 13 km SE of Okapa, 1650–1870 m, 26.VIII. 1964, J. & M. Sedlacek coll.

Neuroctenus javanicus Bloete, 1965 Fig. 110.

Neuroctenus javanicus Bloete, 1965, *Zool. Verh.* **75:** 20, fig. 110–111.

♀. Macropterous. Elongate ovate, densely and sharply granulate.

Head shorter than width across eyes (23:25); anterior process slightly constricted laterally, rounded and notched apically, reaching tip of antennal segment I; antenniferous tubercles robust, blunt, divergent; postocular acute, placed distant from eyes, reaching outer border of the latter. Eyes semiglobose. Vertex granulate. Antennae slender, relative length of antennal segments I to IV: 9:8:10:8; labium not reaching hind border of labial groove, which is closed.

Pronotum less than 1/2 as long as maximum width (21:45); collar sinuate anteriorly; anterior borders laterad of collar straight, receding, granulate; anterolateral angles angularly rounded; lateral notch sinuate, lateral borders of hind lobe slightly convex; interlobal depression shallow and thrice sinuate.

Scutellum shorter than its basal width (22.5:31); lateral borders carinate, almost straight, tip angularly rounded; disc granulate with an obscured median carina, extending from basal 1/3 of disc to tip.

Hemelytra reaching 2/3 of tergum VI; apical angle of corium subacute, apical border sinuate interiorly.

Abdomen ovate, longer than maximum width across segment IV (74:56); PE-angles III to VI slightly protruding, PE-VII angularly rounded; paratergites rounded, reaching almost to tip of segment IX, which is incised posteriorly. Spiracles II to VI ventral, distant from border, VII and VIII lateral and visible from above.

Color: testaceous, partially ferrugineous; labium and tarsi yellow.

Total length: 5.00 mm; width of pronotum 1.61 mm; width of abdomen 2.00 mm.

Holotype ♀ (Rijksmuseum van Natuurlijke Historie, Leiden), Java, Sukabumi, XII.1935.

Neuroctenus morio Kormilev, new species Fig. 104.

♀. Macropterous. Elongate ovate, roughly granulate; granules large, but low on pronotum; fine on head, tergum VII and connexivum.

Related to *N. incautus* n. sp., but slightly larger, lateral borders of abdomen slightly convex, head larger, as long as width across eyes; anterior process reaching tip of antennal segment I; antenniferous tubercles short, acute, with parallel outer borders; postocular spine minute, not reaching outer borders of eyes. Antennae moderately thick; labium reaching hind border of head, labial groove open posteriorly. Anterior borders laterad of collar straight, carinate and receding; anterolateral angles rounded, neither produced anteriorly, nor laterally. Scutellum granulate, median carina low, and somewhat blurred. Hemelytra reaching almost to hind border of tergum VI; apical angle of corium acute, apical border straight, slightly sinuate interiorly. Abdomen long, with subparallel sides; PE-angles barely protruding, PE-VII angularly rounded; paratergites triangular, reaching tip of rounded posteriorly segment IX. Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above. Fore disc of pronotum with semiobliterated ridges.

Measurements: head 27.5:27; relative length of antennal segments I to II: 11:7.5:–:– (last 2 missing); pronotum 23:51; ratio width of fore lobe/width of hind lobe 40:51; scutellum 25:34; abdomen 80:60.

Color: black to piceous; hind borders of connexiva III to VI, base of antennal segments, coxae, trochanters, tibiae and tarsi brown; labium yellowish brown.

Total length: 6.32 mm; width of pronotum 2.04 mm; width of abdomen 2.40 mm.

Holotype ♀ (BISHOP 9030), Philippines, Negros Or., L. Balinsasayao, 1–7.X.1959, L. W. Quate coll.

Neuroctenus obsoletus Matsuda & Usinger, 1957

Neuroctenus obsoletus Matsuda & Usinger, 1957, *Ins. Micronesia* **7**(3): 152.

DISTRIBUTION: Caroline Is. (Yap).

In the collections of the Bishop Museum there are specimens also from Yap.

Neuroctenus angustus Hsiao, 1964

Neuroctenus angustus Hsiao, 1964, *Acta Ent. Sinica* **13**(4): 601, f. 4–5.

DISTRIBUTION: China, Viet Nam, and Laos.

In the collections of the Bishop Museum there are various specimens of this species from China (Hainan), Viet Nam and Laos.

Neuroctenus dybasi Kormilev, new species Fig. 106.

♂. Macropterous. Elongate ovate, widening posteriorly, then converging.

Head almost as long as width across eyes (♂ 21:22, ♀ 23:23); anterior process constricted laterally, rounded and incised anteriorly, reaching beyond tip of antennal segment I; antenniferous tubercles blunt, slightly diverging; postocular spine small, acute, slightly produced beyond outer borders of eyes. Eyes semiglobose. Vertex finely granulate. Antennae thin, relative length of antennal segments I to IV: ♂ 6:7:8:7.5, ♀ 7.5:7.5:8.5:8; labium reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as maximum width (♂ 18:40, ♀ 20:43); fore lobe narrower than hind lobe (♂ 33:40, ♀ 35:43); anterolateral angles rounded and slightly expanded, but neither produced anteriorly, nor laterally; lateral notch shallow, sinuate; lateral borders of hind lobe subparallel, slightly convex; hind border widely sinuate. Fore disc and hind disc densely granulate; interlobal depression shallow and semiobliterated.

Scutellum shorter than basal width (♂ 20:27, ♀ 21:30); lateral borders carinate and slightly sinuate before apex; tip angularly rounded; disc granulate and with almost obliterated median carina.

Hemelytra reaching basal 1/4 of tergum VII (♂), or 2/3 of tergum VI (♀); apical angle of corium acute, apical border slightly sinuate interiorly.

Abdomen longer than width across segment IV (♂ 62:48, ♀ 71:56); PE-angles slightly protruding, PE-VII angularly rounded; paratergites (♂) slender, reaching 3/4 of hypopygium; the latter rounded posteriorly, triangularly depressed medially at base. Paratergites (♀) small, rounded posteriorly, reaching as far as small, slightly tricuspidate, segment IX. Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above.

Color: piceous; anterolateral angles and posterior border of pronotum, exterior and posterior borders of connexiva III to VII, and venter ferrugineous; labium, trochanters and tarsi yellowish brown.

Total length: ♂ 4.88, ♀ 5.44; width of pronotum ♂ 1.60, ♀ 1.72 mm; width of abdomen ♂ 1.92, ♀ 2.24 mm.

Holotype ♂ (U. S. NAT. MUS.), Palau Is., Koror, 27.XI.1947, H. S. Dybas coll.

Allotopotype ♀ (BISHOP 9031), collected with holotype.

It is a pleasure to dedicate this species to its collector, Dr H. S. Dybas, Associate Curator of Insects at the Field Museum of Natural History, Chicago.

Neuroctenus eurycephalus Kormilev, new species Fig. 109.

♂. Macropterous. Elongate ovate, head and pronotum roughly granulate, scutellum, tergum VII and connexivum, deeply punctured.

Head slightly shorter than width across eyes (♂ 27:28.5, ♀ 31:32); anterior process robust, constricted at base, dilated, rounded and incised anteriorly, reaching basal 1/4 of antennal segment II; antenniferous tubercles dentiform, acute, divaricating and with serrate borders; postocular strong, acute, produced far beyond outer border of eyes. Eyes small, semiglobose. Vertex roughly granulate, infraocular carinae high, crenulate; infraocular callosities deep and wide. Antennae thin and short, relative length of antennal segments I to IV: ♂ 9:10:11:10, ♀ 10:11:–:– (2 apical segments missing). Labium short, not reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as maximum width (♂ 23:53, ♀ 28:59); fore lobe narrower than hind lobe (♂ 44:53, ♀ 49:59); collar distinctly separated from disc; anterolateral angles expanded, angularly rounded and produced laterally as small, rounded lobes, their borders crenulate; lateral notch distinctly sinuate; lateral borders of hind lobe convex, rounded; hind border slightly sinuate. Fore disc with 4(2 + 2) low, granulate ridges; hind disc roughly granulate.

Scutellum shorter than basal width (♂ 25:35, ♀ 30:40); lateral borders carinate, barely sinuate medially, convex near apex; the latter rectangular. Median carina thin on basal 1/3 of disc, wider on apical 2/3; disc deeply punctured.

Hemelytra reaching slightly over fore border of tergum VII (♂), or reaching 2/3 of tergum VI (♀); apical angle of corium acute, apical border twice sinuate.

Abdomen longer than maximum width across segment V (♂), or IV (♀) (♂ 87:68, ♀ 105:80); lateral borders evenly convex and finely crenulate; PE-angles not protruding, PE-VII rounded in both sexes; exterior borders of connexiva VII uneven in both sexes. Paratergites (♂) reaching 2/3 of hypopygium, the latter cordate, depressed on disc medially, shorter than wide (15:23). Paratergites (♀) angular, reaching tip of deeply excavated segment IX. Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above. Connexiva II and III semifused.

Color: ferrugineous; corium along clavus, and ventral side of body medially, reddish brown; central dorsal plate (under hemelytra) orange-brown; membrane black, golden yellowish near base.

Total length: ♂ 6.56, ♀ 7.84 mm; width of pronotum ♂ 2.12, ♀ 2.36 mm; width of abdomen ♂ 2.72, ♀ 3.20 mm.

Holotype ♂ (BISHOP 9032), SE New Guinea, Papua, Brown R., N of Port Moresby, 100 m, 8.VI.1955, J. L. Gressitt coll.

Allotopotype ♀ (BISHOP), collected with holotype.

Paratypes: New Guinea: 1 ♀, Papua, W Distr., Oriomo Govt Sta, 26–28.X.1960, J. L. Gressitt coll.; 1 ♀, SE, Daru I., 3 m, 19.VII.1964, H. W. Clissold coll.; 1 ♀, NE, Bubia, Markham Vall., 50 m, 20.IX.1955, J. L. Gressitt coll.; 2 ♀♀, NW, Nabire, S. Geelvink Bay, 0–30 m, 2–9.VII.

1962, J. Sedlacek coll.; 1 ♀, NW, Biak I., 1.VII.1962, J. L. Gressitt coll.; 1 ♀, W, Vogelkop-Danowaria, 2.VI.1959, T. C. Maa coll.; 1 ♀, W, Waris, S of Hollandia, 450–500 m, 1–7.VIII.1959, T. C. Maa coll. Bismark Arch., 1 ♀, New Britain, Gazelle Pen., Upper Warangoi, Illugi, 25–26.XI. 1962, J. Sedlacek coll.; Solomon Is., 1 ♀, Malaita, E of Kwalo (E of Auki), 350 m, 29.IX.1957, J. L. Gressitt coll.

At first sight, *N. eurycephalus* n. sp. is more similar to some Neotropical *Mezira* species, than Oriental *Neuroctenus*, but it has carinae along fore borders of sterna IV to VI, and the hind border of sternum VI (♀) is bisinuate in middle; spiracles VII are lateral.

Neuroctenus luchti Kormilev, new species

♂. Macropterous. Elongate ovate; head, pronotum and scutellum, granulate; connexivum punctured and with a few, scattered granules.

Head as long as width across eyes (♂ 26:26, ♀ 30:30); anterior process constricted at base, rounded and incised apically, produced beyond tip of antennal segment I; antenniferous tubercles acute, with parallel outer borders; postocular spine acute, slightly produced beyond outer borders of eyes; vertex convex, densely granulate. Antennae thin, relative length of antennal segments I to IV: ♂ 9:9:10:10.5, ♀ 10:10:12:12. Labium reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as maximum width (♂ 23:50, ♀ 25:58); anterolateral angles slightly expanded, rounded; lateral notch weak, sinuate. Fore disc with 4(2 + 2) low ridges.

Scutellum shorter than basal width (♂ 25:32.5, ♀ 27:38); disc flat, basal 1/3 concentrically rugose, apical 2/3 granulate; median carina narrow and low.

Abdomen ovate, longer than width across segment IV (♂ 86:65, ♀ 98:74); lateral borders evenly convex; PE-angles not protruding, PE-VII forming small, rounded lobes (♂), or evenly rounded (♀). Paratergites (♂) reaching 4/5 of hypopygium, the latter cordate. Spiracles II to VI ventral, placed far from border; VII and VIII lateral and visible from above. Hypopygium shorter than wide (14:21).

Color: ferrugineous, partially testaceous; base of membrane whitish.

Total length: ♂ 5.75, ♀ 6.50 mm; width of pronotum ♂ 1.79, ♀ 2.07 mm; width of abdomen ♂ 2.32, ♀ 2.64 mm.

Holotype ♂ (Zoological Institute, Academy of Sciences U.S.S.R., Leningrad), Java, Indien Plateau, K. O. Blawan, 900–1500 m, H. Lucht coll.

Allotopotype ♀, same collection, collected with holotype.

This species is dedicated to its collector, Mr H. Lucht, who collected in Java before World War II.

Neuroctenus persimilis Kormilev, new species Fig. 115.

♂. Macropterous. Elongate ovate, densely granulate.

Related to *N. mayri* Stål, 1870, but hypopygium relatively larger and longer, and more triangular.

Head almost as long as width across eyes (25:24); anterior process long, constricted at base, dilated, rounded and incised apically, reaching beyond tip of antennal segment I; antenniferous tubercles strong, blunt apically, serrate exteriorly, diverging; postocular acute, produced beyond outer borders of eyes. Antennae thin, relative length of antennal segments I to IV: 7:8:10:10; labium reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as wide (23:49); fore lobe narrower than hind lobe (38:49); anterolateral angles slightly expanded and rounded, produced forward to collar; lateral notch sinuate; lateral borders of hind lobe slightly convex; interlobal depression thin, but distinct. Fore lobe and hind lobe densely granulate.

Scutellum shorter than basal width (23:32); lateral borders carinate, sinuate in middle, convex near apex; the latter angular. Median carina blurred on hind 2/3 of disc; the latter granulate, granules arranged in arcuate, transverse rows.

Hemelytra reaching over fore border of tergum VII; apical angle of corium acute, apical border straight, deeply sinuate interiorly.

Abdomen longer than width across segment IV (80:63); lateral borders convex and finely crenulate; connexiva II and III semifused together; PE-angles III to VI barely protruding, angular; PE-VII rounded. Paratergites small, reaching 2/3 of hypopygium; the latter subtriangular, rounded apically, and finely serrate, shorter than wide (15:20); disc with triangular depression at base, granulate in concentrical rows laterad of depression. Spiracles II to VI ventral, placed far from border; VII and VIII lateral and visible from above.

Color: ferrugineous; membrane fuscous, widely whitish at base; labium and tarsi yellow.

Total length: 6.12 mm; width of pronotum 1.96 mm; width of abdomen 2.52 mm.

Holotype ♂ (BISHOP 9033), Philippines, V.1958, H. Milliron coll.

Neuroctenus millironi Kormilev, new species Fig. 108.

♂. Macropterous. Elongate ovate, widening posteriorly until segment V, then converging; head, pronotum, scutellum and corium, granulate; connexivum densely punctured.

Head almost as long as width across eyes (♂ 25:24, ♀ 25:25); anterior process constricted at base, widening, rounded and incised anteriorly, reaching beyond tip of antennal segment I; antenniferous tubercles strong, with blunt tips, slightly diverging; postocular thin, acute, produced beyond outer borders of eyes; vertex densely granulate; infraocular callosities deep. Antennae thin, relative length of antennal segments I to IV: ♂ 8:8:10:10, ♀ 9:9:10:10; labium reaching hind border of labial groove, which is open posteriorly.

Pronotum shorter than maximum width (♂ 21:48, ♀ 22:48); fore lobe narrower than hind lobe (♂ 37.5:48, ♀ 38:48); anterolateral angles rounded, slightly expanded, but neither produced anteriorly, nor laterally; lateral notch angular, lateral borders of hind lobe slightly convex, converging anteriorly. Fore disc with 4 (2 + 2) low, granulate ridges, and with 2(1 + 1) crescent-shaped callosites between them; hind disc densely granulate.

Scutellum shorter than basal width (♂ 22.5:30, ♀ 24:31); lateral borders carinate, almost straight, then converging near apex; tip angular. Disc densely granulate; median carina blurred.

Hemelytra reaching slightly over fore border of tergum VII (♂) or reaching 2/3 of tergum VI (♀); apical angle of corium acute, apical border twice sinuate.

Abdomen longer than width across segment V (♂), or IV (♀); (♂ 71:60, ♀ 86:64); PE-angles II to VI slightly protruding, PE-VII forming a small rounded lobe (♂), or are rounded (♀); exterior borders of connexiva II to VI finely serrate, those of VII roughly granulate in both sexes. Paratergites (♂) small, reaching 3/4 of hypopygium; the latter cordate, shorter than wide (12.5:20), angularly rounded posteriorly and triangulary depressed at base. Paratergites (♀) angularly rounded posteriorly, reaching tip of a small, slightly tricuspidate, segment IX. Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above.

Color: ferrugineous; membrane piceous, brown in middle, whitish at base; labium and tarsi yellowish brown.

Total length: ♂ 5.74, ♀ 6.44 mm; width of pronotum ♂ 1.92, ♀ 1.92 mm; width of abdomen ♂ 2.40, ♀ 2.56 mm.

Holotype ♂ (BISHOP 9034), Philippines, Mindanao, Sulu, Jolo I., Jolo, 24.VIII.1958, H. E. Milliron coll.

Allotopotype ♀ (BISHOP), collected with holotype.

Paratypes: Philippines, 18 ♂♂, 13 ♀♀ & 18 nymphs, collected with holotype; 2 ♀♀, Busunaga Is., 4 km N S. Nicolas, 23.V.1962, H. Holtman and 28.V.1962, M. Thomson coll.; 1 ♂, 1 ♀, Mt Makiling, Laguna, 1.VIII.1938; 1 ♂, Camarines Sur, Mt Isarog, 750–900 m, 4–7.V.1963, H. M. Torrevillas coll.; 1 ♀, Bongao, Tawitawi, 28.VIII.1958, H. E. Milliron coll.; 1 ♂, Malabringo, Mt Lobo, Batangas, 1.VI.1932, 1500 m (5000′), F. C. Hadden coll.

It is a pleasure to dedicate this species to Mr H. E. Milliron who collected it.

Neuroctenus appendiculatus Kormilev, new species Fig. 116.

♀. Macropterous. Elongate ovate; head, pronotum, scutellum and partially corium, finely granulate; connexivum densely punctured.

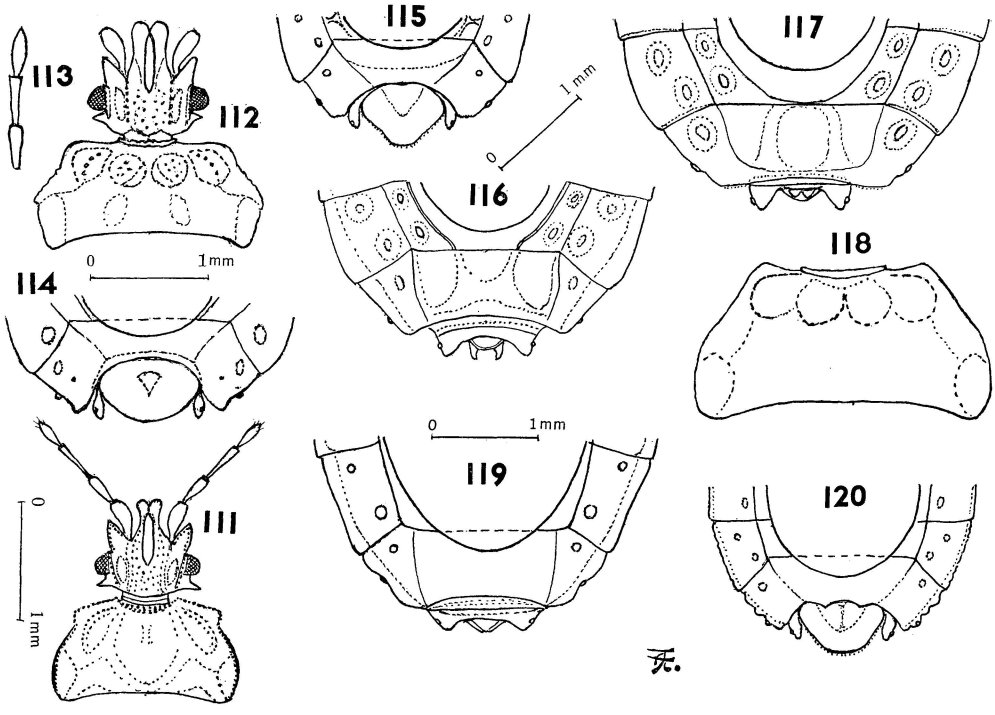


Fig. 111–120. 111, *Neuroctenus javanicus* Bloete, 1965, ♀, head and pronotum; 112, *N. basalis* (Walker), 1873, ♂, type, head and pronotum, 113, same, antenna; 114, same, tip of abdomen from above; 115, *N. persimilis* n. sp., ♂, tip of abdomen from above; 116, *N. appendiculatus* n. sp., ♀, tip of abdomen from above; 117, *N. egelidus* n. sp., ♀, tip of abdomen from above; 118, *N. longicornis* n. sp., ♀, pronotum, 119, same, tip of abdomen from above; 120, *N. ferreus* n. sp., ♂, tip of abdomen from above.

Head as long as width across eyes (28.5:28.5); anterior process long, rounded and slightly incised anteriorly, reaching beyond tip of antennal segment I; antenniferous tubercles strong, acute, diverging; postocular spiniform, produced beyond outer borders of eyes; vertex densely granulate; infraocular callosities deeply depressed. Antennae thin, relative length of antennal segments I to IV: 11:12.5:14:10.5; labium reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as maximum width (23:57.5); fore lobe narrower than hind lobe (45:57.5); anterolateral angles expanded, rounded and finely serrate; lateral notch sinuate; lateral borders of hind lobe convex; hind border widely sinuate. Fore disc with 4(2 + 2) low, granulate ridges; hind disc densely granulate.

Scutellum shorter than its width at base (30:40); lateral borders carinate, straight, slightly convex at apex; tip angularly rounded; median carina thin, disc laterad of it with granules arranged in arcuate rows.

Hemelytra reaching 2/3 of tergum VI; apical angle of corium blunt; apical border twice sinuate.

Abdomen ovate, longer than width across segment IV (100:81); lateral borders convex; PE-angles III to VI slightly protruding; PE-VII rounded; paratergites triangular, produced almost as far as segment IX; the latter triangular, with 2(1 + 1) long, cylindrical appendices laterally, which are 2 × as long as segment IX. Connexiva II and III fused exteriorly, separated interiorly.

Color: ferrugineous. Venter light ferrugineous, labium and tarsi yellowish brown; ovate callous spots on connexiva and midlateral areas yellow.

Total length: 7.32 mm; width of pronotum 2.30 mm; width of abdomen 3.24 mm.

Holotype ♀ (BISHOP 9035), Philippines, Mindanao, Zamboanga del Sur, 11 km NW of Milbuk, 390 m, 5.VIII.1958, H. E. Milliron coll.

Neuroctenus basalis (Walker), 1873 Fig. 112–114.

Crimia basalis Walker, 1873, *Cat. Hem. Het. Brit. Mus.* **7:** 18.

Neuroctenus basalis: Distant, 1902, *Ann. Mag. Nat. Hist.* ser. 7, **9:** 360.

DISTRIBUTION: Celebes.

Holotype ♂ (British Museum, (N. H.), London), Celebes, Wallace coll.

Neuroctenus egelidus Kormilev, new species Fig. 117.

♀. Macropterous. Elongate ovate; head, pronotum and scutellum finely and densely granulate; connexivum deeply punctured.

Head almost as long as width across eyes (32:31); anterior process long, with parallel sides, tapering and declivious anteriorly, produced beyond tip of antennal segment I; antenniferous tubercles long, thin, acute, diverging; postocular dentiform, strong, acute, placed at a distance from eyes and produced beyond outer borders of the latter; vertex granulate. Antennae thin, relative length of antennal segments I to IV: 11:14: 15:13.5; labium reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as maximum width (27:64); fore lobe narrower than hind lobe (50:64); collar raised and sinuate anteriorly; anterolateral angles slightly expanded, rounded and produced forward to collar; lateral notch sinuate; lateral borders of hind lobe convex; hind border weakly sinuate. Fore disc with 4(2 + 2) low ridges and with 4(2 + 2) small callosities; hind disc granulate.

Scutellum shorter than its basal width (34:41); lateral borders carinate, straight, sinuate before apex; apex angular; disc with a low median carina on hind 2/3 of disc, densely granulate elsewhere.

Hemelytra reaching 3/5 of tergum VI; apical border of corium twice sinuate, apical angle blunt.

Abdomen ovate, longer than width across segment IV (104:90); connexiva II and III semifused; PE-angles II to VI barely protruding, PE-VII rounded and truncate posteriorly. Paratergites triangular, produced 2 × as far as short, rounded posteriorly, segment IX; spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above.

Color: ferrugineous, partially with black granulation; membrane black, whitish at base; labium and tarsi yellowish brown.

Total length: 8.00 mm; width of pronotum 2.56 mm; width of abdomen 3.60 mm.

Holotype ♀ (BISHOP 9036), Philippines, Misanis Or., Mt Balabukan, 15 km SW of Gingoog, 1000–2000 m, 1–5.V.1960, H. Torrevillas coll.

Neuroctenus longicornis Kormilev, new species Fig. 118–119.

♀. Macropterous. Elongate, slightly widening posteriorly until segment IV, then converging; finely granulate.

Head almost as long as width across eyes (31:32); anterior process tapering anteriorly, rounded and slightly incised anteriorly, produced beyond tip of antennal segment I; antenniferous tubercles acute, slightly divaricating; postocular small, acute, reaching outer border of eyes; vertex granulate. Eyes semiglobose. Antennae moderately stout, relative length of antennal segments I to IV: 11:11:13:17; labium almost reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as maximum width (30:70); fore lobe narrower than hind lobe (55:70); anterolateral angles rounded, carinate, slightly produced forward beyond collar; lateral notch barely noticeable; lateral borders of hind lobe parallel, strongly converging anteriorly; hind border moderately sinuate; fore disc with 4(2 + 2) low, granulate ridges; hind disc densely granulate.

Scutellum shorter than basal width (37:45); lateral borders carinate, straight, barely sinuate before apex; tip angular. Disc with a thin median carina on posterior 2/3, densely granulate elsewhere.

Hemelytra reaching slightly over fore border of tergum VII; apical angle of corium blunt, apical border twice sinuate.

Abdomen ovate, longer than width across segment IV (110:82); lateral borders convex, PE-angles II to

VI slightly protruding, PE-VII rounded; exterior borders of connexiva II to VI straight, VII sinuate medially. Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above. Paratergites triangular, as long as short, triangular segment IX, which is much shorter than wide (5:11). Sternum VI bisinuate in the middle posteriorly.

Color: black, partially piceous; membrane black, shiny; labium, trochanters and tarsi, brown.

Total length: 8.48 mm; width of pronotum 2.80 mm; width of abdomen 3.28 mm.

Holotype ♀ (BISHOP 9037), Sabah (N Borneo), Tenompok, 1460 m, 48 km E of Jesselton, 2–4. II.1959, T. C. Maa coll.

N. longicornis n. sp. resembles a large *Ctenoneurus*, but the body is rather flat, the labium is relatively short, not passing hind border of labial groove, and sternum VI is bisinuate in the middle posteriorly; all of which are characters of *Neuroctenus*, not *Ctenoneurus*.

Neuroctenus rubrescens (Walker), 1873

Crimia rubrescens Walker, 1873, *Cat. Hem. Het. Brit. Mus.* **7:** 14.
Neuroctenus nitidulus Bergroth, 1887, *Oefv. Finska Vet. Soc. Förh.* **29:** 177. **New Synonymy.**
Neuroctenus rubrescens: Distant, 1902, *Ann. Mag. Nat. Hist.* ser. 7, **9:** 360.

DISTRIBUTION: India to Solomon Islands.

In the collections of the Bishop Museum are specimens from Borneo (Sabah=N. Borneo), Philippines (Mindanao), New Guinea (Papua, NE), and Solomon Is. (Malaita).

Neuroctenus bilobatus Kormilev, new species Fig. 121.

♂. Macropterous. Elongate ovate; head, pronotum very finely and sparsely granulate; scutellum, corium and connexivum finely scabrous.

Head as long as width across eyes (♂ 22:22, ♀ 22:22); anterior process constricted at base, then with parallel sides, rounded and incised apically, reaching, or slightly passing, tip of antennal segment I; antenniferous tubercles small, acute, slightly divaricating; postocular minute, acute, not reaching outer border of eyes, vertex transversely rugose; infraocular callosities narrow. Antennae thin, relative length of antennal segments I to IV: ♂ 8:7:9:9, ♀ 8:7:9:9; labium reaching a line connecting hind borders of eyes.

Pronotum less than 1/2 as long as maximum width (♂ 16:41, ♀ 17.5:41); fore lobe narrower than hind lobe (♂ 32:41, ♀ 32:41); anterolateral angles angularly rounded, produced forward beyond collar, laterally narrowly rimmed and finely serrate; lateral notch sinuate; lateral borders of hind lobe convex, rounded. Fore disc width 2(1 + 1) lateral, semiobliterated, narrow ridges (inner ones obsolete). Hind disc finely, transversely rugose medially, and with sparse, fine, granulation laterally.

Scutellum shorter than basal width (♂ 21:26, ♀ 21:26); lateral borders finely carinate, almost straight; tip acute. Disc with a narrow median carina extending from basal 1/3 to tip; finely scabrous elsewhere.

Hemelytra reaching 1/2 of tergum VII (♂), or hind border of tergum VI (♀); apical angle of corium acute, apical border straight, weakly sinuate interiorly.

Abdomen ovate, longer than width across segment V (♂ 73:52, ♀ 80:55); lateral borders rounded, PE-angles III to VI slightly protruding, angular; PE-VII rounded in both sexes. Paratergites (♂) dilated apically, reaching 1/2 of hypopygium; the latter flat, shorter than wide (11:16), triangularly depressed medially at base, posterolaterally raised and bilobate posteriorly. Paratergites (♀) large, rounded, almost reaching tip of posteriorly truncate segment IX, which is shorter than wide (3.5:9). Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above.

Color: ferrugineous, partially infuscate; membrane black, whitish at base.

Total length: ♂ 5.52, ♀ 5.72 mm; width of pronotum ♂ 1.64, ♀ 1.64 mm; width of abdomen ♂ 2.08, ♀ 2.20 mm.

Holotype ♂ (BISHOP 9038), Laos, Sedone Prov., Paksong, 18.V.1965, P. D. Ashlock coll.

Allotopotype ♀ (BISHOP), same locality and collector, 17.V.1965.

Paratypes: 1 ♀, collected with holotype; 1 ♂, Viet Nam, R. E. Leech coll.

Neuroctenus indonesicus Kormilev, new species

♀. Macropterous. Elongate ovate; finely granulate, connexivum scabrous.

Head almost as long as width across eyes (28:27); anterior process robust, constricted at base, rounded and incised apically, reaching to basal 1/3 of antennal segment II; antenniferous tubercles dentiform, slightly divaricating; postocular acute, slightly produced beyond outer borders of eyes; vertex evenly granulate; infraocular callosities narrow and deep. Antennae moderately robust, relative length of antennal segments I to IV: 8:9:–:– (2 apical missing).

Pronotum less than 1/2 as long as maximum width (23:50); fore lobe narrower than hind lobe (42:50); collar deeply sinuate; anterolateral angles slightly expanded and rounded, neither produced anteriorly, nor laterally; lateral borders slightly sinuate; lateral borders of hind lobe subparallel, rounded and converging anteriorly; hind border shallowly sinuate. Fore disc with 4(2 + 2) wide, semiobliterated ridges; hind disc granulate.

Scutellum shorter than basal width (25:33); lateral borders finely carinate and slightly sinuate medially, convex near tip; latter angularly rounded; disc granulate, median carina reduced to a row of granules on basal 1/3, narrow on apical 2/3 of disc.

Hemelytra reaching 3/4 of tergum VI; apical angle of corium blunt, apical border straight exteriorly, sinuate interiorly.

Abdomen ovate, longer than width across segment IV (83:63); lateral borders evenly rounded; PE-angles II to VI not protruding, PE-VII rounded. Paratergites large, subtriangular, rounded posteriorly, reaching tip of segment IX; the latter short (2.5:7.5), trapezoidal, with valves slightly longer than oviduct. Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above.

Color: ferrugineous; membrane brown, whitish at base.

Total length: 5.71 mm; width of pronotum 1.79 mm; width of abdomen 2.25 mm.

Holotype ♀ (Zoological Institute, Academy of Sciences U.S.S.R., Leningrad), Java, Banjoewangi, 1930, Lucht coll.

Neuroctenus minor Kormilev, new species Fig. 122.

♂. Macropterous. Elongate ovate, finely granulate, connexivum punctured.

Head as long as width across eyes (22:22); anterior process long, strongly constricted at base, dilated, rounded and incised apically, reaching 1/2 of antennal segment II; antenniferous tubercles dentiform, blunt, exteriorly crenulate, slightly divaricating; postocular tiny, acute, placed remotely from eyes, not reaching outer borders of eyes. Vertex granulate, infraocular callosities depressed. Antennae moderately strong, relative length of antennal segment I to IV: 7:6:–:– (2 apical missing). Labium short, by far not reaching hind border of labial groove.

Pronotum less than 1/2 as long as maximum width (17:41); fore lobe narrower than hind lobe (33:41); collar sinuate anteriorly; anterolateral angles slightly expanded, rounded, produced anteriorly as far as collar; lateral notch shallow, lateral borders of hind lobe subparallel, slightly convex, finely crenulate; hind border widely sinuate. Fore disc granulate, with 2(1 + 1) crescent-shaped callosities; hind disc densely granulate.

Scutellum shorter than basal width (17:25); lateral borders carinate, sinuate medially, convex near apex; latter acute. Median carina semiobliterated, extending from basal 1/3 to tip of disc.

Hemelytra reaching slightly over fore border of tergum VII; apical angle of corium rounded, apical border convex, sinuate interiorly.

Abdomen longer than width across segment IV (66:50); lateral borders convex, PE-angles III to VI slightly protruding, VII forming slightly obtuse angle with rounded tip. Connexiva II and III semifused; exterior border of connexivum VII truncate posteriorly. Paratergites small, reaching 3/4 of hypopygium, the latter subcordate, 1/2 as long as wide (11:22). Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above.

Color: light testaceous; membrane infuscate, white at base.

Total length: 4.92 mm; width of pronotum 1.64 mm; width of abdomen 2.00 mm.

Holotype ♂ (BISHOP 9039), Philippines, Los Baños, 1925, Pemberton coll. (H.S.P.A. collection).

Neuroctenus mayri Stål, 1870

Neuroctenus mayri Stål, 1870, *Oefv. Sv. Vet.-Ak. Förh.* **27:** 674.

Neuroctenus lobatus Matsuda & Usinger, 1957, *Ins. Micronesia* **7**(3): 154. **New Synonymy.**

DISTRIBUTION: Philippine Is., Palau Is.

In the collections of the Bishop Museum there are paratypes of *N. lobatus* Matsuda & Usinger, 1957. I could not separate them from *Neuroctenus mayri* Stål, 1870, having seen intermediate specimens. The latter has priority.

Specimens in the collections of the Bishop Museum are from Philippines (Negros Group, Busuanga I.), Sabah (North Borneo), Palau (Koror and Malakal I.).

Neuroctenus lobulatus Kormilev, new species Fig. 123–124.

♀. Macropterous. Elongate ovate; head, pronotum, scutellum and corium finely and sparsely granulate; connexivum densely and deeply punctured.

Head as long as width across eyes (29:29); anterior process long, constricted laterally, rounded and incised anteriorly, reaching beyond tip of antennal segment I; antenniferous tubercles strong, acute, diverging; postocular spine tiny, acute, not reaching outer borders of eyes; vertex granulate, infraocular callosities long and deep. Antennae thin, relative length of antennal segments I to IV: 10:10:–:– (2 apical missing). Labium not reaching hind border of labial groove, which is closed posteriorly.

Pronotum less than 1/2 as long as its maximum width (23:52); fore lobe narrower than hind lobe (42:52); anterior borders laterad of collar sinuate, anterolateral angles expanded into small rounded, oblique lobes; lateral notch sinuate; lateral borders of hind lobe rounded, serrate; hind border almost straight. Fore lobe with 4(2 + 2) semiobliterated, granulate ridges; hind disc finely granulate.

Scutellum shorter than basal width (28:37); lateral borders carinate, straight; disc finely granulate.

Hemelytra reaching 2/3 of tergum VI; apical angle of corium acute, apical border straight, sinuate interiorly.

Abdomen ovate, longer than width across segment IV (90:71); lateral borders slightly convex; PE-angles III to VI protruding, VII produced into small, round promontories, or large tubercles. Paratergites large, with convex exterior borders and sinuate interior, produced beyond tip of excavated segment IX. Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above.

Color: ferrugineous to black; posterior borders of connexiva III to VI thinly ochraceous; membrane black, whitish at base; labium and tarsi ochraceous.

Total length: 6.88 mm; width of pronotum 2.08 mm; width of abdomen 2.84 mm.

Holotype ♀ (BISHOP 9040), NE New Guinea, Karimui, 1080 m, 8–10.VII.1963, J. Sedlacek coll.

Neuroctenus ceramensis Kormilev, new species Fig. 125.

♀. Macropterous. Elongate ovate, finely granulate.

Head as long as width across eyes (28:28); anterior process long, constricted laterally, dilated, rounded and incised anteriorly, reaching beyond tip of antennal segment I; antenniferous tubercles strong, acute, divaricating, crenulate exteriorly; postocular spiniform reaching, or slightly passing outer borders of eyes; vertex granulate, infraocular callosities deep; eyes semiglobose. Antennae moderately strong, relative length of antennal segments I to IV: 10:10.5:12:10.5; labium not reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as maximum width (24:52); fore lobe narrower than hind lobe (42:52); anterolateral angles expanded into subtriangular, apically rounded lobes, produced laterally; lateral notch angular; lateral borders of hind lobe subparallel, crenulate, converging anteriorly; hind border widely sinuate. Fore disc with 4(2 + 2) crescent-shaped callosities on inner ridges and between inner and outer ridges; 4(2 + 2) ridges low, granulate; hind disc granulate.

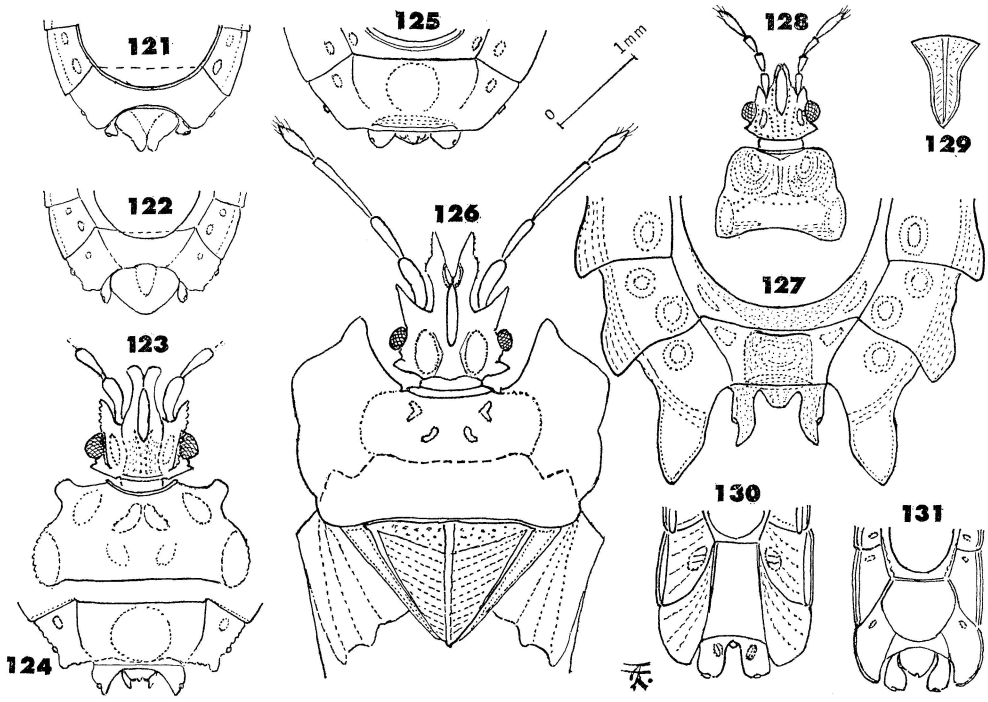


Fig. 121–131. 121, *Neuroctenus bilobatus* n. sp., ♂, tip of abdomen from above; 122, *N. minor* n. sp., ♂, tip of abdomen from above; 123, *N. lobulatus* n. sp., ♀, head and pronotum; 124, same, tip of abdomen; 125, *N. ceramensis* n. sp., ♀, tip of abdomen from above; 126, *Dimifaia lobulata* n. g., n. sp., ♀, head, pronotum, scutellum and corium; 127, same, tip of abdomen from above; 128, *Pelecoris angustus* n. g., n. sp., ♀, head and pronotum; 129, same, scutellum; 130, same, tip of abdomen from above; 131, same, ♂, tip of abdomen from above.

Scutellum shorter than its basal width (25:35); lateral borders carinate, straight, slightly convex near apex; latter angularly rounded; median carina blurred, disc densely granulate.

Hemelytra reaching 3/4 of tergum VI; apical angle of corium rounded, apical border straight, sinuate interiorly, disc granulate.

Abdomen longer than wide across segment IV (87.5:68); lateral borders slightly convex; PE-angles II to VI barely protruding; PE-VII rounded. Paratergites subtriangular, slightly produced beyond small, rounded posteriorly segment IX. Connexiva II and III fused. Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above.

Color: testaceous, partially ferrugineous; membrane infuscate, whitish at base; labium and tarsi yellow.

Total length: 6.70 mm; width of pronotum 2.08 mm; width of abdomen 2.72 mm.

Holotype ♀ (Bishop 9041), Ceram, Piroe, I.1909, F. Muir coll.

Neuroctenus muiri Kormilev, new species Fig. 107.

♂. Macropterous. Elongate ovate, slightly widening posteriorly; finely granulate.

Head slightly shorter than width across eyes (♂ 22:23, ♀ 25:25); anterior process moderately strong, rounded and incised apically, reaching, or slightly produced beyond, tip of antennal segment I; antenniferous tubercles blunt, with subparallel sides (♂), or slightly diverging (♀); postocular spine small, acute, reaching outer border of eyes, or slightly produced beyond them. Vertex granulate. Relative length of antennal segments

I to IV: ♂ 7.5:8:10:9.5, ♀ 8:8:9.5:10. Labium not reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as its maximum width (♂ 18:44, ♀ 21:47); fore lobe narrower than hind lobe (♂ 35:44, ♀ 38:47); collar sinuate anteriorly; anterolateral angles slightly expanded, rounded, produced anteriorly to collar; lateral notch slightly sinuate; lateral borders of hind lobe slightly convex, converging anteriorly; hind border slightly sinuate. Fore disc with 4(2 + 2) low, granulate ridges, and with 4(2 + 2) callosities.

Scutellum shorter than its basal width (♂ 20:30, ♀ 22:31); lateral borders carinate, straight, convex near apex; apex angular; median carina extending from basal 1/3 to tip of disc, the latter granulate laterad of carina.

Hemelytra extending slightly over fore border of tergum VII (♂), or not reaching hind border of tergum VI (♀); apical angle of corium acute, apical border slightly sinuate interiorly.

Abdomen longer than width across segment IV (♂ 71:54, ♀ 77:61); lateral borders slightly convex; PE-angles III to VI barely protruding, PE-VII angularly rounded in both sexes. Paratergites (♂) dilating apically, reaching 2/3 of hypopygium; the latter rounded posteriorly, weakly, triangularly depressed at base; shorter than wide (12:18). Paratergites (♀) subtriangular, rounded posteriorly, produced 2 × as far as small, tricuspidate, segment IX. Spiracles II to VI ventral; VII and VIII lateral and visible from above.

Color: testaceous; membrane brown, whitish at base; labium and tarsi yellowish brown.

Total length: ♂ 5.25, ♀ 5.85 mm; width of pronotum ♂ 1.76, ♀ 1.88 mm; width of abdomen ♂ 2.16, ♀ 2.44 mm.

Holotype ♂ (BISHOP 9042), Larat, III.1907, F. Muir coll.

Allotopotype ♀ (BISHOP) collected with holotype.

Paratopotypes: 1 ♂ & 4 ♀♀, (BISHOP), collected with holotype.

This species is dedicated to the memory of the eminent naturalist, F. Muir.

Neuroctenus ferreus Kormilev, new species Fig. 120.

♂. Macropterous. Elongate ovate; head, pronotum, scutellum and corium densely granulate; connexivum finely and densely punctured.

Head slightly longer than its width across eyes (♂ 27.5:26, ♀ 27:26); anterior process with parallel sides, rounded and slightly incised anteriorly, reaching slightly beyond tip of antennal segment I; antenniferous tubercles dentiform, acute, slightly divaricating; postocular spine small, acute, reaching outer borders of eyes; vertex granulate. Eyes semiglobose. Antennae moderately strong, relative length of antennal segments I to IV: ♂ 10:9:10:11, ♀ 10:9:10:10; labium not reaching hind border of labial groove, which is closed posteriorly.

Pronotum less than 1/2 as long as maximum width (♂ 25:53, ♀ 25:57); fore lobe narrower than hind lobe (♂ 40:53, ♀ 41:57); anterolateral angles produced laterally as small, triangular lobes with rounded tips; lateral borders of hind lobe slightly convex, strongly converging anteriorly. Fore disc with 4(2 + 2) almost obliterated ridges; hind disc densely granulate.

Scutellum shorter than basal width (♂ 26:35, ♀ 30:38); lateral borders carinate, slightly sinuate near apex; tip acute. Median carina thin, semiobliterated, disc laterad of it densely granulate.

Hemelytra reaching middle of tergum VII (♂), or not reaching hind border of tergum VI; apical angle of corium acute, apical border twice sinuate.

Abdomen longer than width across segment IV (♂ 83:67.5, ♀ 92:73); lateral borders convex, rounded; PE-angles II to VI slightly protruding, PE-VII angularly rounded; exterior borders of connexivum VII very roughly granulate in both sexes. Paratergites (♂) small, clavate, reaching 3/5 of hypopygium; the latter shorter than wide (14:20) widely rounded posteriorly, twice (1 + 1) depressed on disc near base, finely serrate posteriorly. Paratergites (♀) subtriangular, slightly produced beyond tip of a small, excised posteriorly, segment IX. Spiracles II to VI ventral, placed far from border; VII and VIII lateral and visible from above. Connexiva II and III fused.

Color: ferrugineous; membrane piceous, whitish at base; labium and tarsi light brown.

Total length: ♂ 6.44, ♀ 7.16 mm; width of pronotum ♂ 2.12, ♀ 2.28 mm; width of abdomen ♂ 2.70, ♀ 2.92 mm.

Holotype ♂ (BISHOP 9043), Philippines, Mindanao, Kabasalan, Zamboanga, 4.V.1932, F. C. Hadden coll.

Allotype ♀ (BISHOP), Philippines, Mindanao, Surigao, L. Mainir, 23.XI–1.XII.1959, C. M. Yoshimoto coll.

Paratype: 1 ♀, Philippines, Mindanao, Agusan S., 10 km SE Francisco, 14.XI.1959, L. W. Quate coll.

Neuroctenus subfurcatus (Walker), 1873

Mezira subfurcata Walker, 1873, *Cat. Hem. Het. Brit. Mus.* **7:** 27.

Neuroctenus subfurcatus: Distant, 1902, *Ann. Mag. Nat. Hist.* ser. 7, **9:** 361.

Neuroctenus meziroides Kormilev, 1958, *J. N. Y. Ent. Soc.* **66**(2): 94. **New Synonymy.**

DISTRIBUTION: New Guinea.

Through the kind offices of Mrs G. M. Black, of the British Museum (N. H.) I have had the opportunity to examine the type of *Mezira subfurcata* Walker, 1873, and found that my species *Neuroctenus meziroides* Kormilev, 1958, is identical, with the species of Walker having priority.

1 ♀, NE New Guinea, Mt Lamington (Australian Museum, Sydney).

Neuroctenus vicinus Signoret, 1880

Neuroctenus vicinus Signoret, 1880, *Ann. Mus. Civ., Genova* **15:** 542.

DISTRIBUTION: New Guinea, Solomons, Australia.

3 ♂♂ & 2 ♀♀, NE New Guinea, Mt Lamington; 1 ♀, Solomon Is. (all from Australian Museum, Sydney); 1 ♀, Australia, Somerset, I.1875, L. M. D'Albertis coll. (Universitetets Zoologiske Museum, Helsingfors).

Dr Clare R. Baltazar, Assistant Research Director of the National Institute of Science and Technology, Manila, kindly communicated that the types of *Neuroctenus antennatus* Banks, 1909, and *Neuroctenus weberi* Banks, 1909, were destroyed during World War II. As the descriptions of Banks are insufficient to recognize his species, they were omitted from the key. Also *Neuroctenus medius* Bergroth, 1894, which was synonymized with *N. weberi*, was omitted from the key, as I was unable to obtain this species for examination.

Genus **Dimifaia** Kormilev, new genus

Macropterous. Elongate ovate, flat. Anterior process of head deeply forked, produced far beyond tip of antennal segment I, genae flattened and much longer than clypeus; antenniferous tubercles dentiform, flat, acute, strongly diverging. Eyes globose, protruding, but not pedunculate. Postocular tubercles dentiform, short, acute, distant from eyes, not reaching outer borders of the latter. Infraocular carinae absent. Infraocular callosities large, ovate. Vertex granulate. Antennae thin and long, antennal segment I clavate, II and III tapering toward base, IV fusiform; segments I, II and IV subequal in length, III longer. Labium arising far from apex of head, labial atrium slit-like, closed; labium reaching hind border of a wide and deep labial groove.

Pronotum about 2.5 as wide as long medially; collar distinct; anterolateral angles strongly expanded and produced anteriorly beyond fore border of eyes, and laterally, forming wing-like expansions which are somewhat concave on upper surface; interlobal sulcus thin, distinct only medially, where it is transverse, laterally receding in sinuate line and somewhat obliterated. Fore disc with 4(2 + 2) small callosities, hind disc granulate. Hind border weakly sinuate medially, convex laterally.

Scutellum triangular, shorter than basal width; lateral borders carinate, carinae tapering and then evanescent before tip; latter slightly produced; median carina distinct, tapering posteriorly; disc granulate on basal 1/4, transversely rugose on apical 3/4.

Hemelytra reaching 2/3 of tergum VI (♀), or 3/4 of tergum VII (♂), divided into clavus, corium and membrane, the latter large, transparent, without veins. Corium reaching beyond fore border of connexivum III, its basolateral border angularly produced laterally, apical angle acute, apical border twice sinuate, veins finely granulate. Clavus finely punctured along border.

Abdomen ovate, as long as its maximum width (to tip of segment IX) (♀), or longer than wide (to tip of hypopygium) (♂), much longer to tips of PE-VII; PE-angles lobulate, directed slightly backward, lobes increasing from III to VII. Connexivum flat, wide; exterior borders of connexiva sinuate anteriorly, convex posteriorly. Paratergites (♀) long, pointed, produced far beyond small, rounded posteriorly, segment IX. Spiracles II to VII ventral, placed far from border, VIII dorsolateral and visible from above. Paratergites (♂) lanceolate, produced far beyond tip of hypopygium; the latter cordate, shorter than its maximum width, with a forked median depression, basolateral and apical portions inflated, the latter rounded posteriorly.

Pro-, meso- and metasternum scabrous; extended portion of propleura finely punctured, hind portion granulate; meso- and metapleura also granulate. Metathoracic scent-gland openings small, placed laterad of middle acetabula. Acetabulae strongly rugose. Fore borders of sterna IV to VI carinate. Sternum VI posteriorly trisinuate, gonocoxopodites biarcuate as in *Neuroctenus* Fieber.

Legs. Trochanters free; femora fusiform, unarmed; tibiae cylindrical; fore tibiae with a small, preapical comb. Aroliae long and thin.

Type-species: *Dimifaia lobulata* n. sp.

Dimifaia n. g. runs in Usinger & Matsuda's key to Old World Mezirinae (1959: 195) to *Neuroctenus* Fieber, 1861, but it is also related to the American genus *Placogenis* Usinger & Matsuda, 1959. From the former it differs by strongly produced genae, expanded anterolateral borders of pronotum, lobulate connexivum and long, lanceolate paratergites in both sexes. From the latter it differs by carinate fore borders of sterna IV to VI and bisinuate fore borders of gonocoxopodites in the ♀.

Dimifaia lobulata Kormilev, new species Fig. 126–127.

♀. Macropterous. Elongate ovate; anterior process of head deeply forked, produced anteriorly beyond eyes. The latter small, globose, protruding. Anterolateral borders of pronotum strongly expanded, wing-like, produced forward beyond eyes, granulate, but granules somewhat obliterated.

Measurements: head ♀ 42:36, ♂ 37:34; relative length of antennal segments I to IV: ♀ 15.5:14:22:15, ♂ 15:13:19:15; pronotum ♀ 30:86, ♂ 30:80; scutellum ♀ 38:45, ♂ 32:43; abdomen ♀ 120 to tip of segment IX, or 142 to tip of PE-VII; width of abdomen: ♀ 120, ♂ 103, ♂ 115 to tip of hypopygium, or 130 to tip of PE-VII: 103, both across segment IV; hypopygium 16:17.5.

Color: yellowish brown; expansions of pronotum and lobes of connexivum pale yellow; antennal segment IV and corium brown; membrane reddish brown, transparent; middle of tergum VI reddish brown; middle of tergum VII, terga VIII and IX, and paratergites, pro-, meso- and metasterna, femora with exception of subapical ring, piceous; venter reddish brown medially.

Total length: ♀ 8.0 (8.75 to tip of PE-VII), ♂ 7.44 (7.96 to tip of PE-VII)mm; width of pronotum 3.0 mm; width of abdomen 4.07 mm.

Holotype ♀ (BISHOP 9045), SE New Guinea, Papua, S. Highland, Dimifa, SE of Mt Giluwe, 2200 m, 9.X.1958, J. L. Gressitt coll.

Allotype ♂ (BISHOP), NE New Guinea, Bulldog Rd, 40 km S Wau, 2200–2800 m, 22–31.V. 1969, J. & M. Sedlacek coll.

Genus **Pelecoris*** Kormilev, new genus

Macropterous. Elongate, slightly constricted at basal 1/3 of abdomen, then widening again; shiny.

Head slightly shorter than width across eyes; anterior process tapering, slightly incised anteriorly, genae slightly longer than clypeus and not contiguous, reaching beyond tip of antennal segment I; antenniferous

*Pele is the Polynesian goddess of fire.

tubercles short, acute, reaching middle of antennal segment I. Eyes large, semiglobose, protruding. Postocular tubercles small, not reaching outer borders of eyes; infraocular callosities small, elongate; vertex with a few rows of small tubercles. Antennae moderately robust, with antennal segment I cylindrical, II and III strongly tapering toward base, IV fusiform; 1st 3 segments equal in length, IV 2 × as long as each of preceding. Labium arising far from tip of head, reaching fore border of prosternum; labial atrium wide, open; labial groove wide and shallow, open posteriorly, its borders granulate.

Pronotum trapezoidal, more than 1/2 as long as maximum width, its anterolateral angles evenly rounded; lateral notch shallow, but distinct; hind border evenly sinuate. Fore disc with a weak median sulcus and 2(1 + 1) callosities laterad of it, surrounded by rows of granules; interlobal depression weak; hind disc sparsely granulate, mostly along borders.

Scutellum triangular, longer than width at base; lateral borders finely carinate and strongly sinuate near middle, then parallel, convex near apex; median carina thin, tapering backward, reaching tip of scutellum; disc granulate at base, obliquely striate on apical half.

Hemelytra complete, almost reaching hind border of tergum VI in both sexes. Clavus triangular, narrow, not reaching tip of scutellum; corium short, not reaching hind border of connexivum II, its basolateral border granulate, lateral thinly carinate, smooth; veins of corium granulate, forming 1 large cell; apical angle of corium blunt, apical border 2 × sinuate, interior sinus deeper, almost semicircular; membrane large, with anastomosed veins.

Abdomen ovate, much longer than maximum width across segment IV. Connexiva II and III fused dorsally, but separated ventrally. Connexiva widens progressively and becomes larger from II to VII, and more reflexed, almost vertical on VI, the whole abdomen trough-like. Tergum VII truncate anteriorly (♂) and depressed on disc, its lateral borders arcuate, converging posteriorly and meeting in front of hypopygium; between tergum VII, connexiva VII and hypopygium, are placed 2(1 + 1) small, triangular sclerites, separated from connexiva VII by fine sulci, and meeting medially, separating tergum VII from hypopygium (absent in ♀). In the ♀, lateral borders of tergum VII slightly divergent posteriorly, reaching hind border just outside paratergites; exterior borders of connexiva with a double rim on II to VI, and with a single rim on VII; inner rim on IV to VI higher and wider than outer rim. Paratergites in both sexes very large, flat, subtruncate posteriorly and produced far beyond tip of hypopygium, or segment IX (♀). Hypopygium small, flat, rounded and slightly incised posteriorly; segment IX (♀) small, shifted on the ventral side, so that from above only tip is visible. Spiracles II to VII ventral, placed far from border, VIII terminal.

Sternum. Pro-, meso- and metasternum scabrous; propleura granulate, on mesopleura granules arranged in rows, metapleura rugose. Metathoracic scent-gland openings very small.

Venter. Sterna IV to VI without carina, or row of granules, along fore border. Posterior borders of sterna II to V straight; (♂) sternum VI sinuate posteriorly, sternum VII angularly incised in middle, VIII barely visible as a narrow rim. (♀) sternum VI deeply sinuate in middle posteriorly, VII split into 2(1 + 1) plates; gonocoxopodites long and obliquely rugose; paratergites of IX small, much shorter than paratergites of VIII.

Type-species: Pelecoris angustus n. sp.

Pelecoris n. g. resembles *Ctenoneurus* Bergroth, particularly species from "samoaensis group," but may be separated from *Ctenoneurus* by the fore borders of sterna IV to VI without carinae, or row of granules, by its very large paratergites, and by segment IX (♀) almost completely shifted on the ventral side.

Pelecoris angustus Kormilev, new species Fig. 128–133.

♂. Macropterous. Elongate, constricted at base of abdomen; partially granulate.

Measurements: head ♂ 20:22, ♀ 20:22.5; relative length of antennal segments I to IV: ♂ 6:6:–:– (2 apical missing), ♀ 6:6:6:12; pronotum ♂ 22.5:38, ♀ 22.5:37; scutellum ♂ 25:21, ♀ 25:21; abdomen ♂ 85:38 (to the tip of hypopygium) across segment VI, or 90:38 (to the tip of paratergites), ♀ 85:44 (to the tip of segment IX) across segment VI, or 92:44 (to the tip of paratergites); hypopygium 8:10.

Color: ♂, ferrugineous; antennae and humeral callosities yellowish brown; labium, coxae, trochanters, tibiae and tarsi pale yellow; membrane piceous, whitish along base. ♀, sepia brown; antennae, humeral cal-

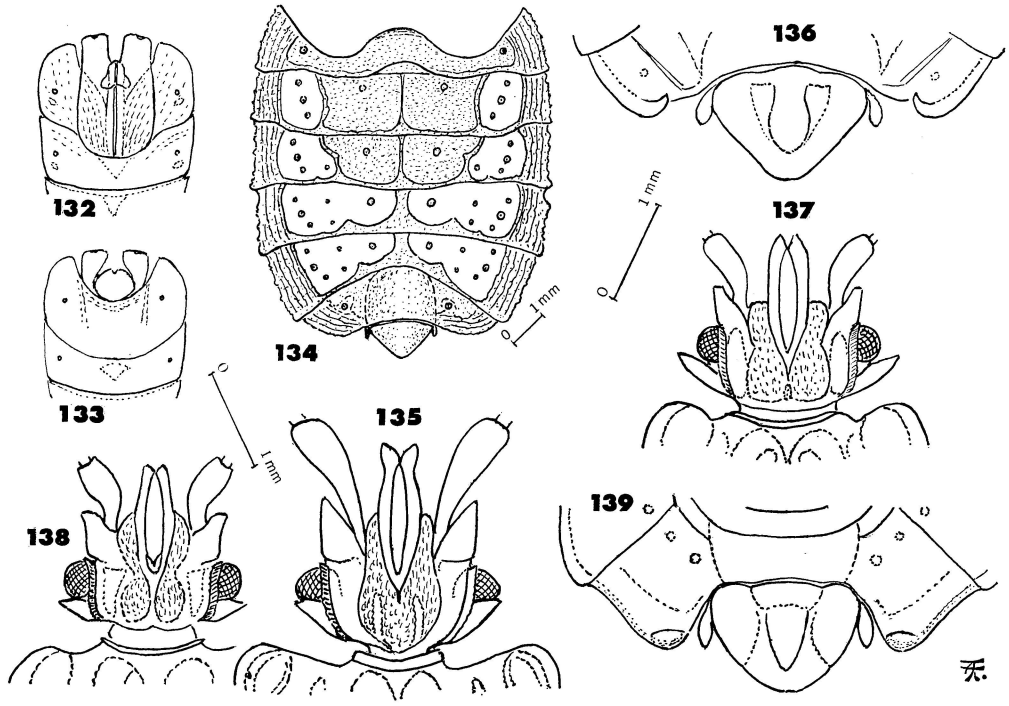


Fig. 132–139. 132, *Pelecoris angustus* n. g., n. sp., ♀, tip of abdomen from below; 133, same, ♂, tip of abdomen from below; 134, *Chrysodaspis maai* n. g., n. sp., ♂, venter; 135, *Daulocoris bicaudatus* n. sp., ♂, head and fore border of pronotum; 136, same, tip of abdomen from above; 137, *D. gazellensis* n. sp., ♀, head and fore border of pronotum; 138, *D. formosanus* n. sp., ♂, head and fore border of pronotum; 139, same, tip of abdomen from above.

losities and tips of femora yellowish brown; labium, coxae, trochanters, tibiae and tarsi, pale yellow.

Total length: ♂ 5.53 to tip of hypopygium, or 5.71 to tip of paratergites; ♀ 5.46 to tip of segment IX, or 5.71 to tip of paratergites mm; width of pronotum ♂ 1.36, ♀ 1.32 mm; width of abdomen ♂ 1.36, ♀ 1.57 mm.

Holotype ♂ (BISHOP 9046), New Caledonia, Foret de Thi, 100–300 m, 25.III.1961, J. Sedlacek coll.

Allotype ♀ (BISHOP), New Caledonia, 10 km S of Koh, 300 m, 31.I.1963, G. Kuschel coll.

Genus **Chrysodaspis** Kormilev, new genus

Elongate ovate; granulate, covered with sparse, long, erect bristles, sometimes present even on membrane. Venter of ♂♂ with U-shaped surface of a golden, or brown, tomentum, absent in ♀♀.

Head almost as long as width across eyes; anterior process thin, conical, incised anteriorly, reaching about 1/2 of antennal segment I; antenniferous tubercles dentiform, acute, diverging; eyes small, semiglobose, protruding; postocular tubercles small, acute, placed close to eyes and not reaching outer border of latter; infraocular carinae low, finely granulate; vertex granulate. Antennae long, granulate, 2.5 as long as head width across eyes; antennal segment I clavate; II and III regularly tapering toward base, on upper end bearing corona-like ring of short processes; IV fusiform; 1st 3 segments subequal in length, IV shorter. Labial atrium slit-like, closed; labial groove open posteriorly, labium reaching, or slightly passing fore border of prosternum.

Pronotum about 1/2 as long as maximum width; fore lobe strongly sloping, almost vertical, hind lobe convex; collar distinctly separated from disc and produced forward; anterior borders laterad to it slightly convex, crenulate; anterolateral angles subangular, or rounded, crenulate; lateral notch sinuate; lateral borders of hind lobe convex, rounded; hind border deeply sinuate medially, similar as in subgenus *Zemira*, convex laterally. Fore disc with a median depression, and laterad of it with 4(2 + 2) large ridges, posteriorly overhanging interlobal depression, which is deep and narrow. Hind disc longitudinally elevated at humeri, granulate, less granulate in middle of disc.

Scutellum triangular, shorter than basal width; all borders carinate, tip excised; fore border convex in middle, lateral borders straight; median ridge T-shaped, robust; disc laterad of it granulate and transversely rugose.

Hemelytra complete, produced beyond fore border of tergum VII in both sexes. Corium long, almost reaching hind border of connexivum III; its basolateral border short, straight, and slightly reflexed; apical angle rounded, or blunt; apical border slightly sinuate; membrane with anastomosed veins, in some species covered with sparse, slightly curved hairs.

Abdomen ovate, longer than wide in both sexes; lateral borders slightly convex, rounded; coarsely, irregularly granulate; PE-angles II to VI angularly protruding, PE-VII rounded, not produced. Connexivum wide; connexiva clearly separated from each other, depressed and mostly smooth on exterior half; scabrous and granulate, with raised callous spots, on interior half. Tergum VII strongly raised backward in ♂♂, regularly raised in ♀♀. Paratergites (♂) small, cylindrical; or (♀) large, rounded posteriorly. Hypopygium small, cordate, with a stout median ridge; segment IX (♀) tricuspidate. Spiracles II to VIII ventral, placed far from borders; on paratergites placed near the base in both sexes.

Venter very characteristic in ♂♂, less so in ♀♀. In ♂, sternum II slightly sinuate in middle posteriorly, widening laterally. Sterna III and IV with a smooth, narrow, and shiny median carina, which is distinctly wider on V and VI; sternum III mesad of spiracles with 2(1 + 1) curved carinae separating middle black portions from lateral covered with golden, or brown, tomentum; sternum IV with similar carinae, only angularly produced interiorly, also separating middle black portions from lateral portions covered with golden, or brown, tomentum; sterna V and VI lacking 2(1 + 1) middle, black portions, but areas covered with golden, or brown, tomentum are produced mesad until median ridge. Sternum VII is entirely black, raised medially for reception of hypopygium. Connexivum on ventral side black, shiny, longitudinally rugose. Venter in ♀♀ different: median carina absent, midlateral carinae on sterna III and IV absent, and golden, or brown, tomentum on sterna III to VI absent. Sterna III to VI have posterior borders smooth in middle, and disc very roughly and densely granulate, the same as gonocoxopodites and paratergites VIII and IX.

Prosternum with a high, inverted "T"-shaped, median ridge; mesosternum depressed medially and sparsely granulate; metasternum hexagonal, granulate laterally. Pro-, meso- and metapleura granulate. Metathoracic scent-gland openings long and straight.

Legs. Trochanters free; femora fusiform, granulate, with a few rows of tooth-like, sharp granules on apical 1/2 interiorly; tibiae subcylindrical, narrowed at base; fore tibiae with a fine, subapical comb inferiorly. Tarsi without arolia.

Type-species: Chrysodaspis maai n. sp.

Chrysodaspis n. g. is related to the genus *Mezira* A. S., 1843, particularly to the Oriental species like *M. teter* (Bergroth), 1894, but may be separated principally by the curious pattern of median and midlateral carinae on the venter of the ♂♂.

Key to species of *Chrysodaspis* n. g.

1(2). Anterolateral angles of pronotum slightly expanded and roughly granulate, angular or subangular 2

Anterolateral angles of pronotum expanded sideways, rounded and finely granulate. (Philippines) ..... **ovatus***

2(1). Anterolateral angles of pronotum angular; abdomen (♂) laterad of hypopygium truncate.

*Described as new.

(Borneo) ..... **angulatus***

Anterolateral angles of pronotum subangularly rounded; abdomen (♂) laterad of hypopygium convex, rounded. (Borneo) ..... **maai***

Chrysodaspis maai Kormilev, new species Fig. 134.

♂. Macropterous. Elongate ovate; membrane without hairs.

Anterior process of head cleft anteriorly, reaching 1/2 of antennal segment I; postocular spines not reaching outer border of eyes. Anterolateral angles of pronotum subangular, forming an obtuse angle with blunt tip. PE-angles slightly protruding, angular, with blunt tip on VI. Exterior borders of connexiva VII distinctly convex, exterior borders of connexiva VI and VII together forming an angle of about 135°; posterior border of abdomen convex, rounded.

Measurements: head 21:22, relative length of antennal segments I to IV: 15:15:14:10; pronotum 30:55, ratio width of fore lobe/width of hind lobe 40:55; scutellum 27:31; abdomen 77:72 across segment III; hypopygium 10:15. Paratergites reaching 1/2 of hypopygium.

Color: black; pilosity on body rufous, tomentum on venter golden yellow.

Total length: 16.00 mm; width of pronotum 5.50 mm; width of abdomen 7.20 mm.

Holotype ♂ (BISHOP 9047), Sabah (North Borneo) West Coast Residency, Ranau, 500 m, 22–25.I.1959, T. C. Maa coll.

It is a pleasure to dedicate this species to its collector, Prof. Tsing-chao Maa, who first drew attention to the curious tomentum on the venter of the ♂.

Chrysodaspis angulatus Kormilev, new species

♂. Macropterous. Elongate ovate, membrane with dispersed, slightly curved hairs.

Anterior process of head with parallel sides, slightly incised anteriorly, reaching to 2/5 of antennal segment I; postocular tubercles very small, not reaching outer border of eyes. Anterolateral angles of pronotum almost rectangular, with blunt tip; lateral borders sinuate before middle, crenulate. PE-angles II to VI angular, protruding; exterior borders of connexivum VII slightly convex, rounded; exterior borders of connexiva VI and VII together forming an angle of about 115°; posterior borders of abdomen truncate.

Measurements: head 19:20; relative length of antennal segments I to IV: 11.5:12:11.5:10; pronotum 25:47, ratio width of fore lobe/width of hind lobe 33:47; scutellum 22:28; abdomen 70:65 across segment IV; hypopygium 10:13.

Color: black; pilosity on body and membrane rufous; tomentum on venter brownish yellow.

Total length: 14.6 mm; width of pronotum 4.70 mm; width of abdomen 6.50 mm.

Holotype ♂ (BISHOP 9048), Borneo, Sarawak, Sarikei Distr., Rejang Delta, 15–26.VII. 1958, T. C. Maa coll.

Paratype 1 ♂, Borneo, Sarawak, Nango Palagus near Kapit, 180–585 m, 7–14.VIII.1958, T. C. Maa coll. (BISHOP).

Chrysodaspis ovatus Kormilev, new species

♀. Macropterous. Elongate ovate; entire body granulate and covered, including membrane, with dispersed, curled hairs.

Anterior process of head conical, slightly incised anteriorly, clypeus strongly raised, much shorter than genae, the latter contiguous in front of clypeus, reaching 3/5 of antennal segment I. Antenniferous tubercles acute and diverging; postocular dentiform, placed close to eyes, reaching slightly beyond outer border of latter. Anterolateral angles of pronotum expanded laterally and rounded; lateral notch almost rectangular. Abdomen ovate; exterior borders of connexiva more or less convex, particularly on connexivum VII; PE-angles II to VI slightly protruding, blunt; PE-VII rounded. Paratergites large, rounded, reaching 1/2 of tricuspidate segment IX. Venter without carinae and tomentum, characteristic for the ♂♂.

Measurements: head 22:24, relative length of antennal segments I to IV: 14:16:16:11; pronotum 30:52, ratio width of fore lobe/width of hind lobe 44:52; scutellum 30:32; abdomen 87:70.

Color: black; tips of antennal segments IV, labium, coxae, trochanters and tarsi, dark brown.

Total length: 16.50 mm; width of pronotum 5.20 mm; width of abdomen 7.00 mm.

Holotype ♀ (BISHOP 9049), Philippine Is., Mindanao, Bukidnon, 1250 m, Mt Katanglad, 4–9.XII.1959, L. W. Quate coll.

Genus **Daulocoris** Usinger and Matsuda, 1959

The genus *Daulocoris* was separated from *Mezira* A. S. by Usinger & Matsuda. As the main characters in which they differ, Usinger & Matsuda indicated the open labial atrium and small tufts of hairs on the membrane, but some species which should be referred to *Daulocoris* have the labial atrium semiclosed, or even closed and slit-like. Small tufts of hairs on the membrane are absent in other species, and the postocular tubercles are generally well developed, subcylindrical and produced far beyond the outer borders of eyes in most species of *Daulocoris*. In some of them they are much smaller, acute, and look more like those of *Mezira*. With all these confusing species, I am reluctant to suppress *Daulocoris* as a genus, because with all its diversity, it still represents a separate group of species, and I prefer to leave it until a worldwide revision of the whole *Mezira* complex is possible.

Two specimens of *Daulocoris* Usinger & Matsuda, 1959 were kindly sent for examination by Dr P. van Doesburg, Jr., of the Rijksmuseum van Natuurlijke Historie in Leiden. These were identified by Bloete, one as *D. feanus* (Bergroth), 1889, and another as *D. marginella* Bloete, 1965, (paratype). Both are *D. auritomentosus* (Kormilev), 1955, so we have:

Daulocoris auritomentosus (Kormilev), 1955

Mezira auritomentosa Kormilev, 1955, *Rev. Ecuat. Ent. Paras.* **2:** 488.

Daulocoris auritomentosus: Usinger & Matsuda, 1959, Class. Aradidae, p. 324.

Daulocoris marginella Bloete, 1965, *Zool. Verh.* **75:** 27. **New Synonymy**

DISTRIBUTION: Borneo.

In the collections of the Bishop Museum are specimens from Borneo (Sarawak, W. Borneo), New Guinea and Solomon Is.

Daulocoris nasutus (Stål), 1870, new combination

Brachyrhynchus nasutus Stål, 1870, *Oefv. Sv. Vet.-Ak. Förh.* **27:** 673.

Brachyrhynchus membranaceus var. *nasutus:* Lethierry & Severin, 1894, *Cat. Hém. Hét.* **3:** 43.

Mezira membranacea: Usinger & Matsuda, 1959, Class. Aradidae, p. 380 (partim).

Brachyrhynchus nasutus: Usinger & Matsuda, 1959, Class. Aradidae, p. 380 (as syn.).

Brachyrhynchus nasutus Stål, 1870 belongs to the genus *Daulocoris* Usinger & Matsuda, 1959, which I identified after examination of the type, kindly loaned by Dr Per Inge Persson of the Naturhistoriska Riksmuseum in Stockholm. Usinger and Matsuda (l. c.) synonymized the species with *Mezira membranacea* (F.).

KEY TO SPECIES OF *Daulocoris* USINGER & MATSUDA

1(2). Labial atrium closed, slit-like, at most slightly open.....2
Labial atrium wide open.....6

2(1). Labium short, reaching, or not reaching, hind border of labial groove.....3
Labium long, produced beyond hind border of labial groove 4

3(2). Postocular tubercles small, acute, only reaching outer border of eyes; PE-VII (♂) long, raised, curled and converging. (Borneo).....**bicaudatus***
Postocular tubercles long, cylindrical, produced far beyond outer borders of eyes. (Borneo,

*Described as new.

Philippines).....**cornigerus** (Kormilev), 1953

4(2). Anterior process of head short, reaching 3/4 of antennal segment I; postocular tubercles only slightly produced beyond outer borders of eyes; tomentum on upper side of body short, but distinct.....5

Anterior process of head long, reaching tip of antennal segment I; postocular tubercles long, subacute, produced obliquely upward far beyond outer borders of eyes; tomentum practically absent. (New Britain).....**gazellensis***

5(4). Widening posteriorly; head narrower, ratio length/width 37:43 (♂); antennae 2 × as long as width of head across eyes. (Taiwan).....**formosanus***

Sides subparallel; head wider, ratio length/width 37:50 (♂); antennae relatively shorter, only 1.8 × as long as width of head across eyes. (Thailand).....**robustus***

6(1). Anterior process of head distinctly produced beyond tip of antennal segment I.....7

Anterior process at most slightly passing tip of antennal segment I.....8

7(6). Antennae relatively shorter, about 1.4 × as long as width of head across eyes; segment IX (♀) short and wide, ratio length/width 5:8. (Borneo, New Guinea, Solomon Is.).....**auritomentosus** (Kormilev), 1955

Antennae relatively longer, about 1.6 × as long as width of head across eyes; segment IX (♀) longer and narrower, ratio length/width 7:8. (Philippines, Borneo)...**nasutus** (Stål), 1870

8(6). Anterior process of head almost reaching, reaching, or slightly passing tip of antennal segment I; antennae relatively shorter, 1.7 × as long as width of head across eyes. (Burma, Thailand, Philippines).....**feanus** (Bergroth), 1889

Anterior process of head distinctly shorter than tip of antennal segment I; antennae relatively longer, 1.9 × as long as width of head across eyes.....9

9(8). Antenniferous tubercles long and slender, reaching about 2/5 of antennal segment I; segment IX (♀) 1/2 as long as its basal width (15:30). (Taiwan).....**tomentosus** (Kormilev), 1955

Antenniferous tubercles short and wide, reaching about 1/4 of antennal segment I; segment IX (♀) longer, ratio length/width 14:25. (S. China).....**vestitus** Hsiao, 1964

Daulocoris bicaudatus Kormilev, new species Fig. 135–136.

♂. Macropterous. Elongate with parallel sides; head, pronotum, scutellum and corium covered with rusty tomentum.

Head as long as width across eyes (51:50); anterior process constricted near tip, incised anteriorly, reaching 2/3 of antennal segment I; antenniferous tubercles acute, with straight outer borders, divaricating; postocular small, adherent to eyes, reaching outer borders of the latter. Eyes moderately large. Vertex granulate, covered with dense tomentum. Antennae more than 2 × as long as head width across eyes (107:50); relative length of antennal segments I to IV: 30:28:28:21; labium reaching hind border of labial groove, which is closed posteriorly.

Pronotum 1/2 as long as maximum width (50:103); fore lobe narrower than hind lobe (80:103). Anterolateral angles moderately expanded, rounded and produced anteriorly to collar; lateral notch angular, lateral borders of hind lobe rounded; hind border deeply sinuate in middle. Fore disc with 4(2 + 2) high ridges, of which the middle ones with crescent-shaped callosity; both discs with tomentum.

Scutellum shorter than its width at base (50:55); all borders carinate; median ridge and borders with dense tomentum, disc granulate and less pilose.

Hemelytra reaching basal 1/4 of tergum VII; apical angle of corium acute, reaching 3/4 of connexivum III; apical border slightly and widely sinuate; membrane with short, curled hairs.

Abdomen longer than its maximum width across segment IV (132:112); lateral borders parallel, PE-angles II to VI slightly protruding; PE-VII (♂) produced backward, upward and inward, forming 2(1 + 1) curls, reaching tip of small paratergites. Hypopygium small, shorter than wide (25:38), with a stout median ridge, reaching 3/4 of disc and flanked with 2(1 + 1) deep depressions. All spiracles ventral, placed far from border. Venter shiny, finely granulate, with extremely short, dispersed hairs.

Legs. Femora with rows of short teeth interiorly.

Color: black; connexivum and ventral side dark ferrugineous.

Total length: 11.32 mm; width of pronotum 4.12 mm; width of abdomen 4.48 mm.

Holotype ♂ (BISHOP 9051), Sabah (Borneo), W, Mowong, F. Muir coll.

Daulocoris gazellensis Kormilev, new species Fig. 137.

♀. Macropterous. Elongate ovate, with subparallel sides; setigerous granulation very fine, with extremely short bristles; tomentum absent.

Anterior process long, with parallel sides, rounded and incised anteriorly, reaching tip of antennal segment I; antenniferous tubercles strong, truncate apically, diverging; postocular long, subacute, directed obliquely upward and anteriorly, produced far beyond outer borders of eyes. Labium long, produced beyond fore border of prosternum; labial atrium slit-like, labial groove open posteriorly. Vertex raised, granulate.

Collar narrow, but distinct; anterolateral angles rounded, slightly expanded, reaching forward as far as collar; lateral notch sinuate, shallow; lateral borders of hind lobe parallel, converging anteriorly; hind border deeply sinuate in middle. Fore disc with 4(2 + 2) finely granulate ridges, hind disc finely granulate.

Lateral borders of scutellum carinate, straight, tip rounded; median carina thin and low, extending from basal 1/3 to tip; disc granulate.

Hemelytra extending beyond fore border of tergum VII; apical angle of corium rounded, apical border straight.

Lateral borders of abdomen subparallel, slightly rounded; PE-II to VI not protruding, PE-VII angularly rounded. Paratergites large, rounded, reaching 2/5 of segment IX, which is slightly incised posteriorly.

Femora with rows of granules inferiorly.

Measurements: head 46:46, relative length of antennal segments I to IV: 20:23:22.5:19; pronotum 42.5:100, ratio width of fore lobe/width of hind lobe 80:100; scutellum 53:60, abdomen 139:118 across segment IV; segment IX 15:22.5.

Color: dark ferrugineous; legs yellowish brown with black granulation.

Total length: 11.16 mm; width of pronotum 4.00 mm; width of abdomen 4.72 mm.

Holotype ♀ (BISHOP 9052), Bismark Arch., New Britain, Gazelle Pen., Upper Warangoi, Illugi, 230 m, 8–11.XII.1962, J. Sedlacek coll.

D. gazellensis n. sp. is a rather peculiar species, and I was unsure of where to place it; but the strongly produced postocular spines, the long labium, and the shape of pronotum forced me to put it in the genus *Daulocoris*, and not in *Mezira*.

Daulocoris formosanus Kormilev, new species Fig. 138–139.

♂. Macropterous. Elongate ovate, widening posteriorly; tomentum very short.

Related to *D. bicaudatus* n. sp., but smaller and wider posteriorly, particularly in ♂; head relatively shorter, postocular tubercles slightly longer; labium much longer, produced beyond fore border of prosternum; labial atrium slit-like, labial groove open posteriorly. Anterolateral angles of pronotum not reaching fore border of collar. PE-VI angles distinctly produced, rounded; PE-VII curled upward, but not converging. Hypopygium different.

Measurements: head ♂ 45:51, ♀ 50:54; relative length of antennal segments I to IV: ♂ 20:27:27:25, ♀ 22:30:30:29; pronotum ♂ 50:100, ♀ 60:112; ratio width of fore lobe/width of hind lobe ♂ 81:100, ♀ 90:112; scutellum ♂ 47:53, ♀ 53:60; abdomen ♂ 136:129 across segment VI, ♀ 160:135 across segment V; hypopygium 30:41, segment IX ♀ 15:25.

Color: piceous; connexivum and tarsi reddish brown; tomentum rusty.

Total length: ♂ 10.11, ♀ 11.71 mm; width of pronotum ♂ 3.57, ♀ 4.00 mm; width of abdomen ♂ 4.61, ♀ 4.82 mm.

Holotype ♂ (BISHOP 9053), Taiwan, Puli, VII.1954, native collector.

Allotopotype ♀, paratopotypes 4 ♂♂ & 3 ♀♀, and 4 nymphs of various instar, all collected with holotype (BISHOP).

D. formosanus n. sp. is another difficult species to place. It resembles *Mezira subtriangula* Kormilev, 1957, but the labium is distinctly longer, produced beyond the fore border of prosternum, the hypopygium is slightly different, and the short tomentum suggest that it belongs to *Daulocoris*.

Daulocoris robustus Kormilev, new species Fig. 140.

♂. Macropterous. Elongate ovate, with subparallel sides and rusty tomentum.

Also related to *D. bicaudatus* n. sp., but head distinctly shorter, anterior process not incised anteriorly, postocular tubercles longer, produced beyond outer borders of eyes; labium longer, extending beyond fore border of prosternum. Anterolateral angles of pronotum more evenly rounded, less produced anteriorly. Membrane with tufts of hairs (dispersed in *D. bicaudatus* n. sp., mostly arising from veins). PE-VI and PE-VII similar, but hypopygium different, less depressed laterad of median ridge.

Measurements: head ♂ 50:56, ♀ 53:60; relative length of antennal segments I to IV: ♂ 25:30:30:25, ♀ 28:30:30:26; pronotum ♂ 60:127, ♀ 66:132, ratio width of fore lobe/width of hind lobe ♂ 102:127, ♀ 110:132; scutellum ♂ 62:70, ♀ 60:75; abdomen ♂ 155:140 across segment VI, ♀ 180:155; hypopygium 35:45; segment IX ♀ 15:28, paratergites reaching 2/5 of the latter.

Color: black; labium and tarsi brown.

Total length: ♂ 11.75, ♀ 12.85 mm; width of pronotum ♂ 4.53, ♀ 4.71 mm; width of abdomen ♂ 5.00, ♀ 5.54 mm.

Holotype ♂ (BISHOP 9054), Thailand, Chiangmai Prov., Doi Pui, 1685 m, 17.VI.1965, P. D. Ashlock coll.

Allotype ♀ (BISHOP), and paratype 1 ♀, Thailand, Chiangmai Prov., Doi Sutep, 900 m, 14.XI.1957, J. L. Gressitt coll.; 1 ♀, Laos, Xieng Kouang Prov., Bau Sam Thang, 30.XI.1965, native collector; 1 ♀, Laos, Vientiane Prov., Phou Kou Khouai, 29.III.1966, native collector; and 1 ♀, Laos, Sayabouri Prov., Sayabouri, 29.III.1966, native collector (all BISHOP).

D. robustus n. sp. is a typical *Daulocoris*, not a *Mezira*, and is related to *D. bicaudatus* n. sp., less so to D. *formosanus* n. sp.; this was one of the reasons why I put the 2 latter species into *Daulocoris* rather than *Mezira*.

Daulocoris cornigerus (Kormilev), 1953

Mezira cornigera Kormilev, 1953, *Verh. Naturf. Ges. Basel* **64:** 339.

Daulocoris cornigera: Usinger & Matsuda, 1959, Class. Aradidae, p. 324.

DISTRIBUTION: Borneo.

In the collections of the Bishop Museum there are specimens from Borneo, Thailand and Philippines (Mindanao, Camarines Sur, Ifugao Prov., and Misamis Oriental).

Daulocoris feanus (Bergroth), 1889

Brachyrhynchus feanus Bergroth, 1889, *Ann. Mus. Civ., Genova* **27:** 737.

Mezira feana: Kormilev, 1955, *Mushi* **28**(4): 37.

Daulocoris feanus: Usinger & Matsuda, 1959, Class. Aradidae, p. 324.

DISTRIBUTION: Burma.

In the collections of the Bishop Museum there are specimens from Thailand, Laos and New Guinea.

Daulocoris tomentosus (Kormilev), 1955

Mezira tomentosa Kormilev, 1955, *Mushi* **28**(4): 37.

Daulocoris tomentosus: Usinger & Matsuda, 1959, Class. Aradidae, p. 324.

DISTRIBUTION: Taiwan.

In the collections of the Bishop Museum there are specimens also from Taiwan.

Genus **Arictus** Stål, 1865

Stål established the genus *Arictus* in 1865 in the *Hemiptera Africana*, without designating a type-species. The first species referred by Stål to this genus was *Arictus tagalicus* Stål, 1870, from Philippines. Bergroth synonymized *Arictus* with *Mezira* A. S., 1843, in 1886. *Arictus* was revalidated as a genus in 1959 by Usinger & Matsuda. Stål later included in *Arictus* an African and a few American species, reducing *Arictus* to a subgenus (1873). Usinger & Matsuda have limited it to Oriental and Australian species.

Arictus is widely distributed from India to Samoa, and from Taiwan and Marianas to Australia. I had difficulty in identifying *A. thoracoceras* (Montrouzier), 1864, which was described from New Caledonia. It seems that this species has become extremely rare, if not extinct, as I could not find a single specimen, notwithstanding the recent visits of very good collectors. The type of Montrouzier is lost (his collection was split and went to different persons in Europe). Only recently, I had an opportunity to examine 1 specimen collected in 1945 by H. Cook, for which I am expressing my thanks to Dr Charles L. Hogue, Senior Curator of Entomology at the Los Angeles County Museum of Natural History in Los Angeles.

Key to species of *Arictus* Stål

1 (2). Spiracles VII lateral, or sublateral, and visible from above.....2
Spiracles VII ventral, at most placed close to margin, but not visible from above.....7

2 (1). Spiracles VII sublateral, but still visible from above; exterior borders of connexiva distinctly sinuate, PE-angles acutely protruding (♂), though the tips are blunt; less protruding, blunt in ♀. (Palau Is.).....**angularis** (Esaki & Matsuda), 1951
Spiracles VII lateral and clearly visible from above; exterior borders of connexiva not, or only slightly sinuate; PE-angles (♂) not acutely protruding.....3

3 (2). Hypopygium elongate cordate with pointed tip, reaching, or slightly passing tips of paratergites. (New Guinea).....**acuminatus***
Hypopygium cordate, but blunt posteriorly, not reaching, or much shorter than paratergites 4

4 (3). Hypopygium shorter than paratergites; smaller species (7.5–9.0 mm).....5
Hypopygium almost reaching tips of paratergites; larger species (9.0–11.0 mm).....6

5 (4). Head as long as width across eyes; labial groove open posteriorly; PE-VII (♂) longer, reaching tip of hypopygium. (Marianas).....**marianensis** Usinger, 1946
Head slightly longer than width across eyes (35:33); labial groove closed posteriorly; PE-VII (♂) shorter, not reaching tip of hypopygium. (Taiwan).....**taiwanicus***

6 (4). Median ridge of hypopygium Y-shaped, cleft anteriorly; PE-VII produced as far as paratergites; antennae longer, about 1.8 × as long as head wide across eyes. (Laos, Hainan).....**usingeri** (Kormilev), 1955
Median ridge of hypopygium with parallel sides; PE-VII produced as far as hypopygium (slightly less than paratergites); antennae shorter, about 1.7–1.75 × as long as head wide across eyes. (Philippines, Palau, New Guinea, Borneo).....**tagalicus** Stål, 1870

7 (1). Spiracles VII ventral, placed near border, though not visible from above.....8
Spiracles VII ventral, placed far from border.....10

8 (7). Larger species, over 8.5 mm; antennal segment I distinctly shorter than III (29:35).....9
Smaller species, less than 8.5 mm; antennal segment I only slightly shorter than III (19:21). (New Guinea).....**gressitti***

9 (8). Larger species, over 10.5 mm; abdomen longer than wide (♂), or as long as wide (♀);

*Described as new.

paratergites reaching, or almost reaching, tip of hypopygium, or segment IX respectively (♀). (Indonesia, New Guinea).....**alfa** (Kormilev), 1955

Smaller species, 9.0 mm or less; abdomen shorter than wide (♀); paratergites reaching 1/2 of segment IX. (Australia).....**chinai** (Kormilev), 1955

10 (7). Antennal segment I about as long as III.....11

Antennal segment I distinctly shorter than III.....14

11(10). Head distinctly longer than width across eyes.....12

Head at most as long as width across eyes.....13

12(11). Larger species, over 9.5 mm; postocular spines small, not produced beyond outer borders of eyes; paratergites (♀) reaching 1/2 of segment IX. (Australia).....**tasmani** (Kormilev), 1955

Smaller species, less than 8.5 mm; postocular spines distinctly produced beyond outer border of eyes; paratergites (♀) reaching tip of segment IX. (Bismark Arch.).....**sedlaceki***

13(11). Head about as long as width across eyes; exterior borders of connexiva II to V straight, or sinuate anteriorly, rounded on posterior 1/2; PE-angles II to V rounded. (Solomon Is., Bismark Arch., New Guinea).....**lobuliventris** (Kormilev), 1953

Head distinctly shorter than its width across eyes; exterior borders of connexiva II to V straight; PE-angles II to V angular. (Fiji).....**izzardi** (Kormilev), 1955

14(10). Head distinctly shorter than width across eyes.....15

Head at least as long as width across eyes.....16

15(14). Larger species, over 9.5 mm; paratergites (♂) distinctly produced beyond tip of hypopygium; postocular spines strong, curved, produced far beyond outer borders of eyes. (New Guinea).....**longicornis***

Smaller species, less than 9.0 mm; paratergites (♂) shorter, only reaching tip of hypopygium; postocular spines fine, curved or straight, mostly produced beyond outer borders of eyes. (New Guinea).....**brachycephalus** Kormilev, 1969

16(14). Anterior process of head short, reaching 1/2 of antennal segment I.....17

Anterior process longer, reaching 3/5 of antennal segment I.....18

17(16). Smaller species, 6.75–8.5 mm; lateral borders of abdomen nearly parallel. (Sumatra, Java, Borneo).....**sundaicus** Bloete, 1965

Larger species, 7.5–11.0 mm; lateral borders of abdomen more convex, or widening posteriorly (♂).....18

18(17). Larger and wider species, pronotum less than 2.5 as long as wide; postocular spines only reaching outer border of eyes; lateral borders of abdomen convex in both sexes. (Bismark Arch., New Guinea).....**beta** (Kormilev), 1955

Smaller and narrower species, pronotum more than 2.5 as long as wide; postocular spines produced far beyond outer borders of eyes; lateral borders of abdomen straight, diverging posteriorly (♂), or only slightly convex (♀). (New Caledonia, Solomon Is., Bismark Arch., New Guinea).....**thoracoceras** (Montrouzier), 1864

19(16). Head distinctly longer than wide across eyes; antennal segment I less than 2 × as long as II (15:9). (Australia).....**monteithi** Kormilev, 1965

Head as long as wide across eyes; antennal segment I 2 × as long as II (14:7). (Palau, Amboina, New Guinea, Samoa).....**nanamaraki** (Esaki & Matsuda), 1951

Arictus angularis (Esaki & Matsuda), 1951

Mezira angularis Esaki & Matsuda, 1951, *Mushi* **22**(13): 75.

Arictus angularis: Usinger & Matsuda, 1959, Class. Aradidae, p. 314.

DISTRIBUTION: Palau Is.

In the collections of the Bishop Museum there are specimens from Palau and Philippines (Leyte, Camarines Sur, Misamis Or.).

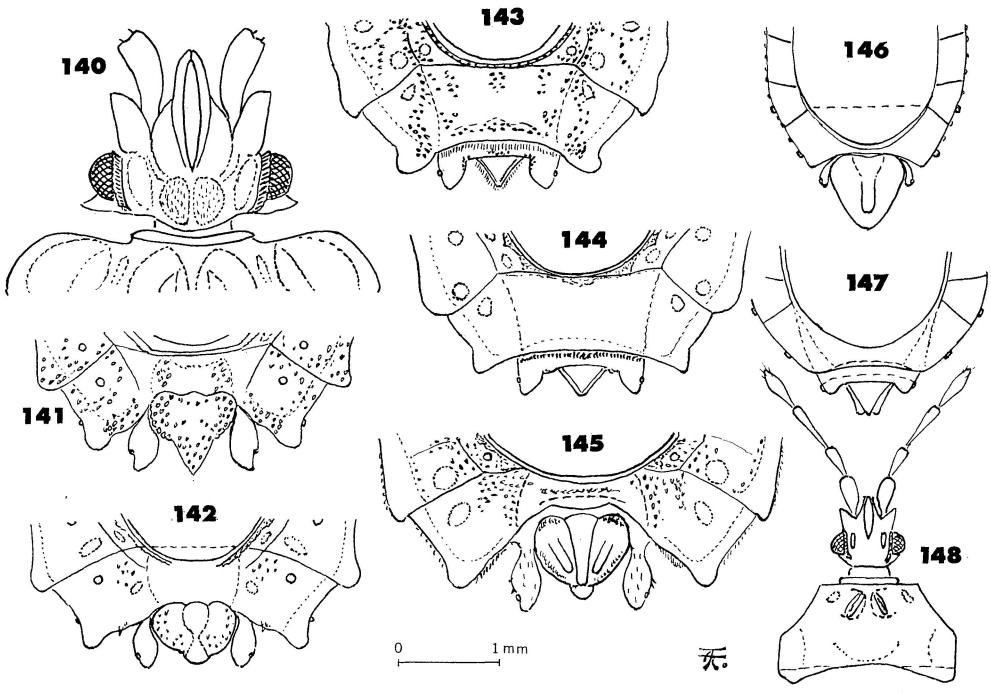


Fig. 140–148. 140, *Daulocoris robustus* n. sp., ♂, head and fore border of pronotum; 141, *Arictus acuminatus* n. sp., ♂, tip of abdomen from above; 142, *A. taiwanicus* n. sp., ♂, tip of abdomen from above; 143, *A. gressitti* n. sp., ♀, tip of abdomen from above; 144, *A. sedlaceki* n. sp., ♀, tip of abdomen from above; 145, *A. longicornis* n. sp., ♂, tip of abdomen from above; 146, *Leiocoris ferrugineus* n. g., n. sp., ♂, tip of abdomen from above; 147, same, ♀, tip of abdomen from above; 148, *L. subparallelus* n. g., n. sp., ♀, head and pronotum.

Arictus acuminatus Kormilev, new species Fig. 141.

♂. Macropterous. Elongate ovate, hypopygium pointed apically.

Head as long as width across eyes (35:35); anterior process short, slightly incised anteriorly, reaching 1/2 of antennal segment I; antenniferous tubercles dentiform, with parallel outer borders; postocular spines thin, straight, slightly produced beyond outer borders of eyes. The latter semiglobose, protruding. Vertex with M-shaped granulation. Antennae moderately stout, less than 2 × as long as width of head across eyes (65:35); relative length of antennal segments I to IV: 18:10:27:10. Labium reaching hind border of a narrow and deep labial groove, which is closed posteriorly.

Pronotum less than 1/2 as long as maximum width (35:86); fore lobe much narrower than hind lobe (66:86); anterior angles with a conical bunch of incrustate bristles, produced anteriorly beyond collar and anterolateral angles; anterolateral angles wing-like, straight interiorly, subangularly rounded apically and rounded exteriorly, produced anteriorly beyond collar. Lateral notch deep and narrow, angular; lateral borders of hind lobe strongly convex, rounded, with 2 longitudinal rows of incrustate bristles. Hind border slightly sinuate medially. Fore disc with a median ridge formed by 2(1 + 1) rows of granules, flanked by 2(1 + 1) callosities, and more laterad with 2(1 + 1) ridges. Hind disc granulate.

Scutellum shorter than width at base (41:45); all borders carinate; median ridge flat, cross-shaped; disc transversely rugose and with few, setigerous granules.

Hemelytra reaching hind border of tergum VI; basolateral border of corium expanded, rounded and reflexed; apical angle acute, apical border slightly sinuate.

Abdomen ovate, longer than width across segment IV (105:100); lateral borders regularly convex; PE-angles II to V angular, protruding; PE-VI more protruding, rounded, PE-VII forming small, rounded, divergent lobes, reaching 1/2 of paratergites. The latter lanceolate, flat, almost reaching tip of hypopygium. Hypopygium shorter than wide (21:25), pointed posteriorly, granulate. Spiracles II to VI ventral, placed far from border, VI and VII lateral and visible from above.

Color: ferrugineous, partially lighter, yellowish brown; some granules on connexivum almost yellow; membrane grayish brown, partially infuscate.

Total length: 7.70 mm; width of pronotum 2.87 mm; width of abdomen 3.33 mm.

Holotype ♂ (BISHOP 9055), NE New Guinea, Bubia, Markham V., 50 m, 20.IX.1955, J. L. Gressitt coll.

Arictus marianensis (Usinger), 1946

Mezira marianensis Usinger, 1946, *Bull. Bishop Mus.* **189:** 34.

Arictus marianensis: Usinger & Matsuda, 1959, Class. Aradidae, p. 314.

DISTRIBUTION: Marianas (Guam).

In the collections of the Bishop Museum are a few specimens from Guam.

Arictus taiwanicus Kormilev, new species Fig. 142.

♂. Macropterous. Elongate ovate, partially covered with short, incrustate hairs.

Head slightly longer than width across eyes (♂ 40:38, ♀ 45:42); anterior process strong, rounded anteriorly, reaching 3/4 of antennal segment I; antenniferous tubercles acute, diverging; postocular spines thin, straight, slightly produced beyond outer borders of eyes. Eyes subconical, strongly protruding. Vertex with M-shaped rows of setigerous granules. Antennae less than 2 × as long as width of head across eyes (62:38); relative length of antennal segments I to IV: ♂ 20:10:21:11, ♀ 20:11:25:10; labium reaching hind border of labial groove, which is closed posteriorly.

Pronotum less than 1/2 as long as maximum width (♂ 31:77, ♀ 38:96); fore lobe narrower than hind lobe (♂ 65:77, ♀ 80:96); anterior angles produced beyond collar; anterolateral angles wing-like, expanded and reflexed; lateral notch deep, almost rectangular; lateral borders of hind lobe rounded; hind border sinuate medially; fore disc with a median ridge formed by a double row of setigerous granules, flanked by 2(1 + 1) ovate callosities and laterad of them with 2(1 + 1) ridges; interlobal depression deep and wide; hind disc granulate.

Scutellum shorter than width at base (♂ 40:46, ♀ 45:53); median ridge cross-shaped, formed by a double row of granules, diverging and overlapping the hind border of pronotum anteriorly; disc transversely rugose and granulate.

Hemelytra reaching over fore border of tergum VII; basolateral borders of corium convex, rounded and slightly reflexed; apical angle acute, apical border strongly sinuate interiorly.

Abdomen longer than its maximum width across segment V (♂), or IV (♀) (♂ 106:100, ♀ 135:120); PE-angles II to V angularly protruding; PE-VI protruding, but tip is rounded; PE-VII produced into small, rounded lobes, reaching middle of paratergites; the latter lanceolate with rounded tip, slightly produced beyond tip of hypopygium; hypopygium cordate, with median ridge constricted medially. Spiracles II to VI ventral, placed far from border, VII sublateral, but visible from above; VIII lateral.

Color: ferrugineous, partially piceous; connexivum bicolorous: piceous, posterior borders and round, callous spots yellowish brown; membrane ochraceous, brown in middle.

Total length: ♂ 8.00, ♀ 9.71 mm; width of pronotum ♂ 2.70, ♀ 3.43 mm; width of abdomen ♂ 3.40, ♀ 4.28 mm.

Holotype ♂ (BISHOP 9056), Taiwan, Puli (Hori), VII.1967, native collector.

Allotype ♀ (CAS), Taiwan, S, Kuraru, 5.V.1935, L. Gressitt coll.

Arictus usingeri (Kormilev), 1955

Mezira usingeri Kormilev, 1955, *Rev. Ecuat. Ent. Paras.* **2:** 494.

Arictus usingeri: Usinger & Matsuda, 1959, Class. Aradidae, p. 314.

DISTRIBUTION: Laos, Hainan I.

In the collections of the Bishop Museum are specimens from Laos, Hainan I.

Arictus tagalicus Stål, 1870

Arictus tagalicus Stål, 1870, *Oefv. Sv. Vet.-Ak. Förh.* **27:** 672.

DISTRIBUTION: Philippines, Palau, Borneo, New Guinea.

In the collections of the Bishop Museum are specimens from Palau, Philippines (Luzon, Camarines), Borneo (N. Borneo, Sarawak), New Guinea.

Arictus gressitti Kormilev, new species Fig. 143.

♀. Macropterous. Elongate ovate, partially covered with setigerous granulation, setae very short and curved.

Head as long as width across eyes (35:35); anterior process slightly constricted laterally and incised anteriorly, reaching 3/5 of antennal segment I; antenniferous tubercles dentiform, slightly diverging; postocular spines strong, curved, produced far beyond outer borders of eyes. Eyes large, semiglobose, protruding. Vertex with M-shaped rows of granules. Antennae moderately strong, less than 2 × as long as width of head across eyes (62.5:35); relative length of antennal segments I to IV: 20:11:21:10.5; labium reaching hind border of labial groove, which is closed posteriorly.

Pronotum less than 1/2 as long as maximum width (34:85); fore lobe narrower than hind lobe (71:85); anterior angles produced far beyond collar; anterolateral angles wing-like, expanded and rounded exteriorly, produced anteriorly beyond collar; lateral notch deep, acute; lateral borders of hind lobe rounded. Fore disc with a median ridge formed by a double row of granules, flanked by 2(1 + 1) callosities, and laterad of the latter by 2(1 + 1) ridges. Interlobal depression deep and wide. Hind disc granulate.

Scutellum shorter than its basal width (45:49); lateral borders carinate, median ridge flat, cross-shaped; disc transversely rugose and with a few granules.

Hemelytra reaching hind border of tergum VI; basolateral borders of corium expanded, rounded and reflexed; apical angle acute, apical border angularly incised.

Abdomen ovate, longer than width across segment IV (119:101); lateral borders of connexiva II and III slightly convex, those of IV to VI slightly sinuate medially, VII strongly sinuate. PE-angles II to V angular, protruding; VI angular, directed slightly posteriorly; VII forming rounded, diverging lobes, reaching 1/2 of segment IX. Paratergites long, acute, reaching tip of segment IX. Spiracles II to VI ventral, placed far from border, VII ventral, placed close to border, VIII lateral and visible from above.

Color: testaceous; granulation, median ridge of scutellum, posterior half of connexiva and round callous spots on them are lighter, pale yellow, or even whitish; membrane black.

Total length: 7.67 mm; width of pronotum 2.83 mm; width of abdomen 3.37 mm.

Holotype ♀ (BISHOP 9057), New Guinea, Papua, Kokoda-Pitoki, 450 m, 24.III.1956, J. L. Gressitt coll.

It is a pleasure to dedicate this species to Dr J. Linsley Gressitt, head of the Department of Entomology at the Bishop Museum in Honolulu, who collected this and so many other new species of Aradidae during his trips to New Guinea and southern Pacific islands.

Arictus alfa (Kormilev), 1955

Mezira alfa Kormilev, 1955, *Rev. Ecuat. Ent. Paras.* **2:** 496.

Arictus alfa: Usinger & Matsuda, 1959, Class. Aradidae, p. 314.

This is a rather rare species found only on New Guinea. In the collections of the Bishop Museum are a few specimens, also from New Guinea.

Arictus sedlaceki Kormilev, new species Fig. 144.

♀. Macropterous. Elongate ovate, partially granulate.

Closely related to *A. gressitti* n. sp., but may be separated from it at once by spiracles VII being ventral, placed far from border.

Measurements: head 40:37, relative length of antennal segments I to IV: 20:10.5:19:9; pronotum 32:84, fore lobe narrower than hind lobe 67:84; scutellum 40:40; abdomen 113:96 across segment V.

Color: ferrugineous; postero-exterior angles of connexiva pale ferrugineous; membrane brown, ochraceous at base.

Total length: 7.89 mm; width of pronotum 2.90 mm; width of abdomen 3.37 mm.

Holotype ♀ (BISHOP 9058), Bismark Arch., New Britain, Gazelle Pen., Gaulim, 140 m, 21–26. X.1962. J. Sedlacek coll.

It is a pleasure to dedicate this species to Mr Josef Sedlacek of the Bishop Museum, who collected this and so many other new species of Aradidae.

Arictus lobuliventris (Kormilev), 1953

Mezira lobuliventris Kormilev, 1953, *Verh. Naturf. Ges. Basel* **64:** 340.

Arictus lobuliventris: Usinger & Matsuda, 1959, Class. Aradidae, p. 314.

This is one of the commonest species of *Arictus*, described from Solomon Is., but recorded also from New Guinea, Bismark Arch., and in the collections of the Bishop Museum are some specimens from the Philippines (Mindanao). Other records are Solomon Is. (Georgia Group, S. Cristobal, Vella Lavella, Florida, Kolombangara), Bismark Arch. (New Britain), and New Guinea, all in the Bishop Museum collections.

Arictus izzardi (Kormilev), 1955

Mezira izzardi Kormilev, 1955, *Rev. Ecuat. Ent. Paras.* **2:** 503.

Arictus izzardi: Usinger & Matsuda, 1959, Class. Aradidae, p. 314.

This species is restricted to Fiji. In the collection of the Bishop Museum are specimens from Rewa and Viti Levu.

Arictus beta (Kormilev), 1955

Mezira beta Kormilev, 1955, *Rev. Ecuat. Ent. Paras.* **2:** 501.

Arictus beta: Usinger & Matsuda, 1959, Class. Aradidae, p. 314.

Described from Woodlark I., but is also found on New Guinea. In the collections of the Bishop Museum are specimens from New Guinea.

Arictus longicornis Kormilev, new species Fig. 145.

♂. Macropterous. Elongate ovate, slightly widening posteriorly, partially granulate.

Head shorter than width across eyes (40:43); anterior process reaching 1/2 of antennal segment I; antenniferous tubercles acute, divaricating; postocular spines strong, curved, produced far beyond outer border of eyes. Eyes semiglobose, strongly protruding. Vertex with M-shaped granulation. Antennae long and thin, more than 2 × as long as width of head across eyes (91:43); relative length of antennal segments I to IV: 25:15:35:16; labium reaching hind border of labial groove, which is closed posteriorly.

Pronotum short and wide (37:102); fore lobe narrower than hind lobe (85:102); anterior angles produced far beyond collar; anterolateral angles wing-like, expanded, rounded exteriorly and slightly reflexed; produced anteriorly almost as far as anterior angles. Lateral notch deep, acute; lateral borders of hind lobe convex, with long, spiculoid granulation. Fore disc with median ridge formed by a double row of granules; flanked by 2(1 + 1) callosities and 2(1 + 1) ridges. Hind disc granulate.

Scutellum as long as its basal width (52:52); median ridge low, disc transversely rugose.

Hemelytra reaching slightly beyond fore border of tergum VII; basolateral borders of corium angularly expanded and reflexed; apical angle acute, apical border angularly incised interiorly.

Abdomen longer than width across segment V (127:120); lateral borders slightly diverging posteriorly; PE-angles II to V angular, protruding, VI rounded, VII slightly produced posteriorly as rounded lobes, almost reaching tip of hypopygium. Paratergites lanceolate with rounded tips, distinctly produced beyond tip of hypopygium; the latter cordate, median ridge not reaching tip of disc, flanked by 2(1 + 1) oblique, short ridges. Spiracles II to VII ventral, placed far from border, VIII lateral and visible from above.

Color: dark brown; middle of pronotum, most of connexivum, antennae and tibiae, reddish brown.

Total length: 9.40 mm; width of pronotum 3.58 mm; width of abdomen 4.20 mm.

Holotype ♂ (BISHOP 9059), NE New Guinea, Wau, 1150 m, 2.IV.1968, P. Colman coll.

Arictus thoracoceras (Montrouzier), 1865

Aradus thoracoceras Montrouzier, 1865, *Ann. Soc. Phys. Linn., Lyon* (2) **7:** 107.

Arictus thoracoceras: Stål, 1870, *Oefv. Sv. Vet.-Ak. Förh.* **27:** 672.

Brachyrhynchus thoracoceras: Bergroth, 1886, *Verh. Zool. Bot. Ges., Wien* **36:** 59.

Mezira thoracocera: Kormilev, 1955, *Rev. Ecuat. Ent. Paras.* **2:** 500.

Arictus thoracoceras: Usinger & Matsuda, 1959, Class. Aradidae, p. 314.

♂. Macropterous. Elongate ovate, granulate and partially covered with short, erect, incrustate hairs.

Anterior process of head reaching middle of antennal segment I; antenniferous tubercles acute, with parallel outer borders; postocular spines thin, produced far beyond outer border of eyes. Vertex with M-shaped rows of incrustate bristles. Labium not reaching hind border of labial groove, which is closed posteriorly.

Anterior angles of pronotum with a bunch of incrustate hairs; anterolateral angles wing-like expanded, rounded and produced anteriorly beyond anterior angles; lateral notch deep, angular; lateral borders of hind lobe convex. Fore disc with 4(2 + 2) low ridges; hind disc granulate.

Scutellum with lateral borders straight, carinate; tip angularly rounded; median ridge moderately stout, covered with a double row of incrustate hairs; disc granulate.

Hemelytra reaching 1/2 of tergum VII; basolateral border of corium high, forming an obtuse angle, reflexed; apical angle of corium rounded, apical border convex exteriorly, angularly incised interiorly.

Abdomen widening posteriorly until segment V, then converging; connexivum wide, PE-angles protruding, acute, directed posteriorly from II to V; rounded and directed posteriorly on VI, forming rounded lobes on VII, reaching tip of hypopygium; exterior borders of connexiva straight from II to VI, slightly sinuate on VII. Paratergites trapezoidal, produced posteriorly beyond tip of hypopygium; hypopygium cordate, with a stout, triangular, median ridge extending from base to tip of disc, and flanked on apical half by 2(1 + 1) short, oblique ridges. Spiracles II to VII ventral, placed far from border, VIII lateral and visible from above.

Measurements: head 32.5:32.5, relative length of antennal segments I to IV: 21:11:–:– (2 apical segments missing); pronotum 36:80, fore lobe narrower than hind lobe 67:80; scutellum 40:40; abdomen 100:97 across segment V; hypopygium 16:22.

Color: ferrugineous; membrane and incrustated hairs grayish brown.

Total length: 8.20 mm; width of pronotum 3.20 mm; width of abdomen 3.88 mm.

DISTRIBUTION: New Caledonia, Solomon Is., Bismark Arch., New Guinea, Philippines.

♂ (Los Angeles County Museum of Natural History, Los Angeles), New Caledonia, Doromena, VII.1945, H. Cook coll.

The anterior process of the head in specimens from Solomon Is., Bismark Arch., and New Guinea generally looks longer because it is difficult to see how far it is extended, as it is incrusted by hairs.

Arictus brachycephalus Kormilev, 1969

Arictus brachycephalus Kormilev, 1969, *Quart. J. Taiwan Mus.* **21:** 228.

In the collections of the Bishop Museum there are specimens from New Guinea.

Arictus nanamaraki Esaki & Matsuda, 1951

Arictus nanamaraki Esaki & Matsuda, 1951, *Mushi* **22**(13): 73.

In the collections of the Bishop Museum there are specimens from Carolines, Palau, Amboina and Samoa.

Genus **Leiocoris** Kormilev, new genus

♂. Elongate ovate, with parallel sides; ♀ with slightly convex sides; covered with sparse, stiff, erect bristles.

Head slightly shorter than width across eyes, in some species longer than wide. Anterior process short, truncate or rounded anteriorly, genae as long as clypeus, reaching about 1/2 of antennal segment I; antenniferous tubercles dentiform, reaching slightly beyond base of antennal segment I. Eyes moderate in size, semiglobose, protruding. Postocular borders rounded, postocular tubercles absent. Vertex convex, granulate. Antennae long, moderately robust, more than 2 × as long as width of head across eyes; antennal segment III the longest, I slightly shorter, II and IV subequal in length, shorter than I. Labial atrium slit-like, closed; labium reaching hind border of a wide and deep labial groove, which is closed posteriorly.

Pronotum trapezoidal, 1/2 as long as maximum width; collar narrow, but prominent; anterolateral angles rounded or angular, neither produced anteriorly, nor laterally; lateral notch forming an obtuse angle; lateral borders of hind lobe subparallel, slightly convex, or straight; hind border widely sinuate. Fore disc with 2 (1 + 1) oblique, low ridges, or callosities, depressed between them. Hind disc granulate, slightly raised in middle and at humeri.

Scutellum triangular, shorter than basal width; lateral borders carinate, slightly sinuate, tip angular; disc raised and granulate on basal 1/2; roughly, transversely rugose on apical.

Hemelytra reaching hind border of tergum VII (♂), or 2/3 of tergum VII (♀); corium reaching beyond hind border of connexivum II; its basolateral borders parallel, lateral converging posteriorly, straight; apical angle acute, apical border convex exteriorly, sinuate interiorly; membrane large, with a few ramificate veins.

Abdomen much longer than its maximum width across segment IV; lateral borders subparallel from II to V, then convergent (♂), or slightly convex (♀). Connexivum moderately wide, PE-angles not protruding, slightly protruding in some species; PE-VII angularly rounded, or rounded in some ♀♀. Tergum VII strongly raised posteriorly in ♂♂, slightly raised in ♀♀. Paratergites (♂) small, clavate, reaching 2/5 of hypopygium; the latter large, conical, with a median ridge not reaching hind border of disc. Paratergites (♀) subtriangular, much shorter than square segment IX. Spiracles large, ventral, progressively nearing border from II to V; VI sublateral, or lateral, and visible from above, VII and VIII lateral.

Venter moderately convex, hind borders of sterna II to V glabrous, straight and raised, discs in front of them punctured; hind border of sternum VI deeply sinuate medially in both sexes, sternum VII straight (♂), or split into 2(1 + 1) triangular plates (♀).

Prosternum convex, finely granulate; meso- and metasternum slightly depressed medially; pro-, meso- and metapleura granulate; metathoracic scent-gland openings small, elongate, placed posterolaterad of middle acetabula.

Legs. Unarmed, trochanters free, femora fusiform, tibiae cylindrical; fore tibiae with a small, apical comb interiorly; claws with arolia.

Type-species: *Leiocoris ferrugineus* n. sp.

Leiocoris n. g. runs in Usinger & Matsuda's key (1959: 195) to the genus *Schoutedeniessa* Usinger & Matsuda, 1959, from the Ethiopian Region, but may be separated by lack of spines on the fore border of the scutellum and by spiracles VI being lateral, or sublateral, and visible from above.

KEY TO *Leiocoris* SPECIES

1(2). Spiracles VI sublateral and slightly visible from above. (New Guinea)..... **subparallelus***
Spiracles VI lateral and clearly visible from above.....2

2(1). Anterolateral angles of pronotum rectangular, at most tips slightly rounded. (Viet Nam)... ..... **angulatus***
Anterolateral angles of pronotum rounded, at most slightly subangular.....3

3(2). Head longer than width across eyes (30:26), antennae 2 × as long as head (60:30). (Borneo) ..... **borneensis***
Head shorter than width across eyes (23:25), antennae more than 2 × as long as head (49:23). (New Guinea)..... **ferrugineus***

Leiocoris ferrugineus Kormilev, new species Fig. 146–147.

♂. Macropterous. Elongate ovate with parallel sides, ♀ with convex sides.

*Described as new.

Measurements: head ♂ 22.5:25, ♀ 25:26, relative length of antennal segments I to IV: ♂ 12.5:9:15:10.5, ♀ 15:12:17.5:12; pronotum ♂ 28:55, ♀ 33:65; fore lobe narrower than hind lobe ♂ 35:55, ♀ 40:65; scutellum ♂ 22.5:35, ♀ 25:35; abdomen ♂ 90:56, ♀ 96:73, both across segment IV; hypopygium 20:22.5.

Color: uniformly ferrugineous; apical 1/2 of antennal segment IV darker; membrane ferrugineous, or fuscous, whitish at base; tarsi yellow.

Anterolateral angles of pronotum moderately convex, rounded.

Spiracles II to V ventral, VI to VIII lateral.

Total length: ♂ 5.53, ♀ 6.03 mm; width of pronotum ♂ 1.83, ♀ 2.17 mm; width of abdomen ♂ 1.87, ♀ 2.43 mm.

Holotype ♂ (BISHOP 9060), NW New Guinea, Bodem, 100 m, 11 km SE of Oerberfaren, 7–17.VII.1959, T. C. Maa coll.

Allotype ♀ (BISHOP), W New Guinea, Vogelkop, Fak Fak, S coast of Bomberai, 100–700 m, 9.VI.1959, T. C. Maa coll.

Paratopotype 1 ♂ (BISHOP), collected with holotype.

Leiocoris borneensis Kormilev, new species Fig. 150.

♀. Macropterous. Elongate ovate, anterolateral angles of pronotum rounded; covered with strong, erect, short bristles.

Measurements: head 30:26, relative length of antennal segments I to IV: 17:12:18:13; pronotum 32:61, fore lobe narrower than hind lobe 41:61; scutellum 21:36; abdomen 90:67 across segment IV.

Color: ferrugineous; eyes, tergum, labium and tarsi, yellowish brown; membrane blackish, whitish at base.

Spiracles II to V ventral, VI to VIII lateral.

Holotype ♀ (BISHOP 9061), N Borneo, Sandakan Residency, Gomantong Caves, 20 mi. S of Sandakan, 22–26.XI.1958, T. C. Maa coll.

Leiocoris angulatus Kormilev, new species Fig. 149.

♀. Macropterous. Elongate ovate, PE-VII angles angular, not rounded; sparsely covered with stiff, erect bristles. Anterolateral angles of pronotum rectangular.

Measurements: head 26.27, relative length of antennal segments I to IV: 15:11:19:11; pronotum 30:64, fore lobe narrower than hind lobe 40:64; scutellum 25:50; abdomen 94:72 across segment IV.

Anterior process of head reaching 1/2 of antennal segment I; genae slightly longer than clypeus, not contiguous. Paratergites rounded exteriorly, not reaching 1/2 of segment IX. Spiracles II to V ventral, VI to VIII lateral.

Color: piceous; membrane black, whitish at base; antennae and legs dark ferrugineous; labium and tarsi reddish brown.

Total length: 6.00 mm; width of pronotum 2.13 mm; width of abdomen 2.40 mm.

Holotype ♀ (BISHOP 9062), Viet Nam, 6 km S Dalat, 1400–1500 m, 9.VI–7.VII.1961, N. R. Spencer coll.

Leiocoris subparallelus Kormilev, new species Fig. 148.

♀. Macropterous. Elongate ovate, with subparallel sides; sparsely covered with stiff, erect, short bristles.

Anterior process of head almost reaching 1/2 of antennal segment I; genae slightly longer than clypeus, not contiguous; lateral borders of hind lobe of pronotum parallel, converging anteriorly; anterolateral angles angular, forming an obtuse angle; abdomen with slightly convex lateral borders. Spiracles II to V ventral, placed far from border, VI sublateral, but visible from above, VII and VIII lateral.

Measurements: head 19:21.5, relative length of antennal segments I to IV: 13:10:15:12; pronotum 25:50, fore lobe narrower than hind lobe 36:50; scutellum 22:28; abdomen 86:57 across segment IV.

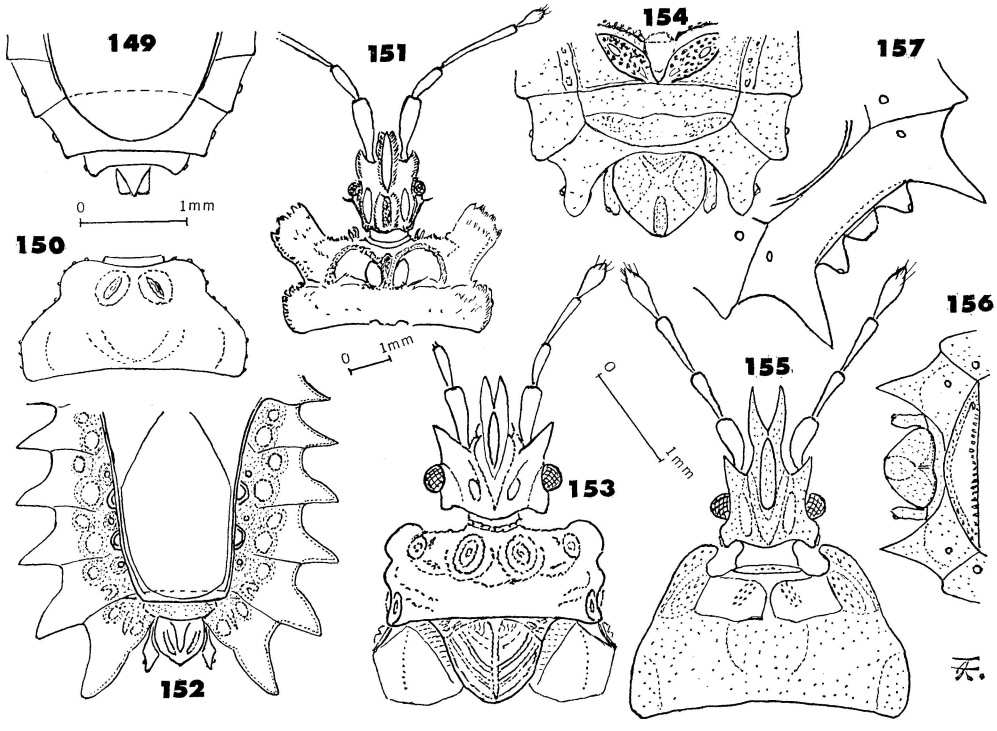


Fig. 149–157. 149, *Leiocoris angulatus* n. g., n. sp., ♀, tip of abdomen from above; 150, *L. borneensis* n. g., n. sp., ♀, pronotum; 151, *Kema acutissima* n. sp., ♂, head and pronotum; 152, same, abdomen from above; 153, *Chinessa brachyptera* n. sp., ♂, head, pronotum, scutellum and hemelytra; 154, same, tip of abdomen from above; 155, *C. fulgida* n. sp., ♂, head and pronotum; 156, same, tip of abdomen from above; 157, *C. forfex* n. sp., ♀, tip of abdomen from above.

Paratergites triangular, blunt apically, reaching basal 1/3 of segment IX, the latter pointed in middle posteriorly, oviduct being slightly longer than valves.

Color: ferrugineous, connexivum lighter; membrane blackish, whitish at base; ventral side mahogany red, labium and tarsi yellowish brown.

Total length: 5.23 mm; width of pronotum 1.67 mm; width of abdomen 1.90 mm.

Holotype ♀ (Bishop 9063), W New Guinea, Bokondini, 40 km N of Baliem Val., ca 1300 m, 5–11.XI.1961, L. W. Quate coll.

Genus **Kema** Kormilev, 1955

This Oriental genus is closely related to *Arictus* Stål, 1865. The first species, for which this genus was established, was from Celebes, the second was from an unknown locality; two others, described in this paper, are from the Philippines and New Guinea.

Key to *Kema* species

1(2). Width across anterolateral lobes of pronotum less than across humeri.....2
Width across anterolateral lobes of pronotum greater than across humeri.....3

2(1). Anterior process of head reaching basal 1/4 of antennal segment I; latter as long as III. (Patria ignota).....**bloetei** Usinger & Matsuda, 1959

Anterior process of head reaching 3/5 of antennal segment I; latter much shorter than III. (New Guinea)..... **papuasica***

3(1). Smaller species, less than 12 mm (♂); lobes of connexiva shorter and wider, their length equal to width at base on connexivum V. (Celebes)..... **lobulata** Kormilev, 1953

Larger species, over 13.5 mm (♂); lobes of connexiva longer and narrower, ratio length/width at base 10:7 on connexivum V. (Philippines)..... **acutissima***

Kema acutissima Kormilev, new species Fig. 151–152.

♂. Macropterous. Elongate ovate, with long, wing-like, anterolateral lobes of pronotum, and pointed lobes on outer borders of connexiva; partially covered with rows of dense, incrustate bristles.

Head longer than width across eyes (♂ 25:19, ♀ 26:20); anterior process robust, with parallel sides, slightly incised anteriorly, with rows of incrustate hairs laterally, reaching basal 1/3 of antennal segment I. Antenniferous tubercles dentiform, acute, with convex outer borders. Eyes small, semiglobose, strongly protruding, but not pedunculate. Postocular tubercles small, spiniform, directed laterally and produced beyond outer borders of eyes. Postocular borders behind them convex. Infraocular callosities large, elongate ovate. Vertex with M-shaped rows of incrustate hairs. Antennae long and relatively thin, more than 2-1/2 × as long as width of head across eyes (♂ 56:19, ♀ 58:20); relative length of antennal segments I to IV: ♂ 20:9:20:7, ♀ 21:10:20:7; labial atrium slit-like, closed; labium reaching basal border of head.

Pronotum less than 1/2 as long as its maximum width (♂ 20:53, ♀ 22:58) across anterolateral lobes. Collar angularly incised anteriorly. Anterolateral angles extended into long, wing-like lobes; lateral notch deep, forming an acute angle; lateral borders of hind lobe convex, with a double row of incrustate hairs, which in the lower row form small tufts; hind border trisinuate. Fore disc with a V-shaped row of incrustate hairs medially, flanked by 2(1 + 1) curved rows laterally, mesad of anterolateral lobes; between rows of hairs are 6(3 + 3) callosities. Hind disc covered with patches of incrustate hairs midlaterally and on humeri.

Scutellum large, triangular, shorter than basal width (♂ 25:30, ♀ 32:35); lateral borders carinate, straight, slightly sinuate in ♀; median ridge with a double row of incrustate hairs, widening at base and overlapping hind border of pronotum; disc roughly, transversely rugose.

Hemelytra reaching basal 1/4 of tergum VII (♂), or hind border of tergum VI (♀). Basolateral borders of corium expanded into large, triangular lobes, with rounded tips, then slightly sinuate. Corium reaching over fore border of connexivum III; apical angle of corium acute, apical border deeply sinuate.

Abdomen shorter than maximum width across lobes of segment V (♂ 61:73, ♀ 71:83). Posterior 1/2 of connexiva strongly expanded into acute lobes, which are progressively longer from II to VII. Paratergites (♂) lanceolate, acute, produced far beyond small, cordate hypopygium; the latter with small, triangular median ridge, flanked by 2(1 + 1) short, oblique ridges. Paratergites (♀) triangular, acute, produced far beyond small, trapezoidal segment IX.

Color: black; callosities on pronotum, middle of corium, connexivum reddish brown.

Total length: ♂ 13.7 (14.7 mm to tips of PE-VII), ♀ 15.0 (15.9 mm to tips of PE-VII); width of pronotum ♂ 5.3, ♀ 5.8 mm; width of abdomen ♂ 7.3, ♀ 8.8 mm.

Holotype ♂ (BISHOP 9064), Philippines, Misanis Or., Mt Kibungol, 20 km SE of Gingeog, 700–800 m, 9–18.IV.1960, M. Torrevillas coll.

Allotopotype ♀ (BISHOP), collected with holotype.

Kema papuasica Kormilev, new species

♂. Elongate ovate, covered with dense, brown tomentum, partially glued together.

Head longer than its width across eyes (47:38); anterior process rounded anteriorly, reaching 3/5 of antennal segment I; antenniferous tubercles acute, slightly diverging; postocular small, acute, not reaching outer borders of eyes. Vertex with 2(1 + 1) rows of setigerous tubercles. Antennae thin and long, 2-1/2 × as long as width of head across eyes (94:38); relative length of antennal segments I to IV: 28:15:36:15. Labium reaching hind border of labial groove, which is open posteriorly.

Pronotum shorter than maximum width across humeri (39:98); fore lobe narrower than hind lobe (87:98).

Collar sinuate anteriorly; anterior angles produced forward; anterolateral expanded into large, oblique, apically rounded lobes; interlobal notch deep, sinuate; humeri expanded and rounded. Fore disc with 4 (2 + 2) ridges; interlobal depression deep; hind lobe with 2(1 + 1) arcuate, oblique ridges contiguous in the middle anteriorly, and with 2(1 + 1) high, longitudinal ridges at humeri.

Scutellum shorter than basal width (46:52); median ridge of 2(1 + 1) parallel carinae, produced anteriorly over hind border of pronotum; basolateral angles with a high tubercle; lateral borders raised, carinate at apical 1/3; tip rounded; disc smooth.

Hemelytra reaching slightly beyond fore border of tergum VII; basolateral portion of corium projecting laterally as a rounded, somewhat reflexed lobe, with raised exterior borders; apical angle of corium acute, apical border sinuate.

Abdomen slightly longer than maximum width across segment III (117:115); exterior borders of connexiva expanded into subtriangular, apically rounded lobes, increasing in length from II to VII; the latter almost reaching tips of paratergites. Paratergites lanceolate, almost reaching tip of a small, cordate hypopygium; the latter with a stout, triangular, apically rounded ridge, produced beyond hind border of hypopygium and flanked by 2(1 + 1) tubercles covered with tomentum. Spiracles II to VII ventral, placed far from border; VIII lateral and visible from above.

Legs. Unarmed.

Total length: 10.0 mm; width of pronotum 3.92 mm; width of abdomen 4.60 mm.

Holotype ♂ (BISHOP 9353), New Guinea, Papua, Fly River, Kiunga, 35 mi., VIII.1969, J. & M. Sedlacek coll.

K. papuasica n. sp. is related to *K. bloetei* Usinger & Matsuda, 1959, but is smaller, the anterior process of head is much longer, antennal segment I shorter than III, and the postocular tubercles do not reach the outer borders of the eyes.

Genus **Chinessa** Usinger and Matsuda, 1959

The genus *Chinessa* Usinger & Matsuda, 1959, is related to *Neuroctenus* Fieber, 1861, but lacks carinae, or rows of granules, on the fore border of sterna IV to VI. The first species was placed by Walker in the genus *Crimia* A. S., 1843, and later transferred by Distant to *Artabanus* Stål, 1865. Usinger & Matsuda separated it as a new genus, *Chinessa*. Having very scanty material for examination, they thought that the ♂♂ lacked produced pronotal lobes, whereas the ♀♀ had them. Actually they had 2 different species.

KEY TO *Chinessa* SPECIES

1 (2). Brachypterous. (New Guinea) ..... **brachyptera***
Macropterous 2

2 (1). Anterolateral angles of pronotum produced anteriorly and inward 3
Anterolateral angles of pronotum differently shaped 7

3 (2). Spiracles VII ventral and not visible from above 4
Spiracles VII lateral and visible from above 6

4 (3). Fore disc of pronotum smooth and shiny, inner ridges reduced to a few granules. (New Guinea) ..... **fulgida***
Fore disc of pronotum scabrous, inner ridges high; if fore disc smooth and shiny around inner ridges, then the latter high and scabrous 5

5 (4). Fore disc of pronotum smooth and shiny around inner ridges, which are high and scabrous; PE-VII lobes (♀) long and pointed, 3 × as long as paratergites. (New Guinea) ..... **forfex***
Entire fore disc of pronotum scabrous; PE-VII lobes (♀) short, barely longer than para-

tergites. (New Guinea).....**armata***

6 (3). Fore disc of pronotum flat, smooth and shiny; spiracles VI sublateral and slightly visible from above. (New Guinea).....**bellicosa***

Fore disc of pronotum scabrous; spiracles VI ventral and not visible from above. (New Guinea).....**bispiniceps** (Walker), 1873

7 (2). Anterolateral angles of pronotum produced anteriorly and generally laterally.....8

Anterolateral angles of pronotum not produced anteriorly, at most carinate and only slightly protruding.....17

8 (7). Spiracles VI and VII ventral and not visible from above; PE-IV to VII lobes acute and directed posteriorly. (New Guinea).....**horribilis***

At least spiracles VII sublateral and visible from above.....9

9 (8). Only spiracles VII sublateral and visible from above.....10

Spiracles VI and VII sublateral and at least slightly visible from above.....12

10 (9). Anterolateral angles of pronotum slightly expanded anteriorly, but not laterally; PE-angles II to V barely protruding, rounded; PE-VII lobes (♀) produced as far as paratergites. (New Guinea) .....**modesta***

Anterolateral angles of pronotum strongly expanded forming large, rounded lobes; PE-III to V distinctly protruding, acute, or blunt apically; if PE-III to V are only slightly protruding, then PE-VII lobes are long, more than 2 × as long as paratergites.....11

11(10). PE-III to V distinctly protruding, forming small, acute lobes; postocular tubercles dentiform, directed laterally, or rounded. (New Guinea).....**lobulata***

PE-III to V barely protruding, blunt; postocular tubercles directed posteriorly. (New Guinea) .....**paralobulata***

12 (9). PE-III to V barely protruding, blunt or angular; postocular tubercles produced posteriorly; 4 (2 + 2) ridges of pronotum small, but distinct.....13

PE-III to V distinctly protruding, forming small, rounded lobes; postocular tubercles subangular, rounded, not produced posteriorly; 4(2 + 2) ridges of pronotum semiobliterated, though discernible. (New Britain).....**lobuliventris***

13(12). PE-VII lobes long, produced far beyond tip of hypopygium (♂), or paratergites (♀).....14

PE-VII lobes short, only reaching tip of hypopygium.....16

14(13). Pilosity on the borders of pronotum, discs of scutellum and corium extremely short, barely discernible 15

Pilosity on the borders of pronotum, discs of scutellum and corium longer, distinctly visible. (New Guinea).....**quadridentata***

15(14). Hypopygium larger, ratio width of hypopygium/width of head across eyes 3:4. (New Guinea) .....**acuminata***

Hypopygium smaller, ratio width of hypopygium/width of head across eyes 2:3. (New Guinea).....**acutissima** Bloete, 1965

16(13). Smaller species (♂) less than 6.5 mm; antennal segment II much shorter than III (9:14); spiracles VI clearly visible from above. (New Guinea).....**necopinata***

Larger species (♂) over 7.5 mm; antennal segment II only slightly shorter than III (12:14); spiracles VI barely visible from above. (New Guinea).....**robusta***

17 (7). Spiracles VII ventral and not visible from above; anterior borders of pronotum laterad of collar straight and slightly receding; anterolateral angles rectangular; PE-II to VII produced into progressively increasing lobes, directed obliquely posteriorly (New Guinea) .....**ferox***

Spiracles VII sublateral and visible from above; anterolateral angles of pronotum rounded, carinate, sometimes slightly produced anteriorly; PE-II to V only slightly protruding, rounded or subangular; PE-VI and VII forming angular or rounded lobes.....18

18(17). Anterior borders of pronotum laterad of collar with 2(1 + 1) small tubercles visible from

above; postocular tubercles dentiform, acute, directed posteriorly; hypopygium narrower, ratio length/width 11:16. (New Guinea).....**gressitti***

Anterior borders of pronotum laterad of collar without tubercles; postocular borders forming an obtuse or right angle with rounded tip, sometimes produced posteriorly.....19

19(18). Postocular tubercles forming an obtuse or right angle with rounded tip; pronotum with larger and higher inner ridges; PE-VII lobes rounded posteriorly in both sexes. (New Guinea).....**iniqua***

Postocular tubercles tuberculiform, directed posteriorly; pronotum with all 4(2 + 2) ridges subequally developed; PE-VII lobes angular with blunt tips. (Ceram)..... .....**iniqua ceramensis***

Chinessa brachyptera Kormilev, new species Fig. 153–154.

♂. Brachypterous. Elongate ovate; sparsely granulate on the head, pronotum, scutellum, corium, tergum VII and hypopygium; roughly punctured on connexivum and central dorsal plate.

Head as long as width across eyes (39:38); anterior process strong, deeply forked anteriorly, genae acute, not contiguous, much longer than clypeus, reaching basal 1/4 of antennal segment II. Antenniferous tubercles strong, acute, diverging. Eyes large, semiglobose, protruding. Postocular borders parallel, produced posteriorly and rounded; infraocular callosities small, ovate; vertex rugose. Antennae relatively thin, relative length of antennal segment I to IV: 16:12:15:11. Labium reaching hind border of labial groove, which is open posteriorly; labial atrium slit-like, closed.

Pronotum subrectangular with slightly expanded and rounded anterolateral angles, produced forward and laterally; shorter than its maximum width (25:58); fore lobe as wide as hind lobe (58:58); lateral notch sinuate, hind border almost straight. Fore lobe with 4(2 + 2) high, round ridges, of which the inner ones are larger. Interlobal depression deep and wide. Hind lobe abbreviated, strongly raised laterally and declivous forward in middle.

Scutellum subtriangular, rounded posteriorly, shorter than its basal width (24:36); lateral borders carinate, irregularly shaped tubercles in basal angles; disc longitudinally raised, median carina thin; disc longitudinally rugose at base, laterally concentric.

Hemelytra reduced to inflated pads as long as scutellum; membrane absent; clavus poorly discernible, transversely rugose; basolateral border carinate and reflexed, apical angular.

Abdomen ovate, longer than maximum width across segment IV (90:81). Tergum I in the shape of a transverse, double crescent, narrowly connected in middle and inflated in middle of each portion. Central dorsal plate consisting of terga II to VI; tergum II declivous posteriorly, tergum III declivous anteriorly; terga IV and V strongly raised medially, forming a pear-shaped hump. Terga II and III fused; terga IV and V, separated from each other, terga III and VI, and from connexivum by flat, smooth carinae. Connexivum wide, indistinctly separated from central dorsal plate; connexiva II and III fused together. PE-II to V slightly protruding, rounded; VI more protruding, VII forming long, rounded posteriorly lobes, directed posteriorly, reaching tips of paratergites. Paratergites cylindrical, reaching 3/4 of hypopygium; the latter cordate, depressed at base medially and with a short median ridge on posterior 1/2. Spiracles II to V ventral, progressively nearer border, VI and VII sublateral and visible from above, VIII latero-terminal.

Metathoracic scent-gland opening large, with parallel sides, open, slightly visible from above in front of basolateral border of corium.

Femora finely denticulate posteriorly; tibiae narrowed at base and apically, with very fine teeth on upper side; arolia present, filiform.

Color: black; antennae, anterolateral angles and base of pronotum, exterior borders of connexiva, scars of dorsal scent-gland openings, and legs dark reddish brown.

Total length: 6.36 mm; width of pronotum 2.07 mm; width of abdomen 2.90 mm.

Holotype ♂ (Bishop 9065), SE New Guinea, Lavani V., 2450 m, 11–18.I.1968, Tawi coll. (Malaise trap).

Chinessa fulgida Kormilev, new species Fig. 155–156.

♂. Macropterous. Elongate ovate; head, pronotum, with exception of fore disc, exterior 2/3 of corium, and hypopygium, granulate; connexivum, parts of tergum, interior 1/3 of corium and clavus deeply punctured; scutellum rugose; fore disc of pronotum glossy, with exception of inner elevations, which are punctured.

Similar to *C. bispiniceps* (Walker), 1873, but postocular tubercles vertically bifid and produced posteriorly; fore disc of pronotum glossy, inner ridges very low, punctured; PE-VII angles more pointed, produced beyond tip of hypopygium; spiracles VII ventral and not visible from above.

Anterior process reaching middle of antennal segment II; anterolateral angles of pronotum produced anteriorly and inward, rounded apically; PE-angles slightly protruding. Labium reaching hind border of labial groove, which is closed posteriorly.

Measurements: head 42:32; relative length of antennal segments I to IV: 14:15:17.5:16; pronotum 36:75, fore lobe narrower than hind lobe 60:75; scutellum 40:46; abdomen 103:87 across segment IV.

Spiracles II to VII ventral, VIII latero-terminal.

Color: black; basal 1/2 of antennal segment I, tergum, basal 1/2 of labium, coxae, trochanters, tibiae apically, and tarsi dark reddish brown.

Total length: 8.57 mm; width of pronotum 2.68 mm; width of abdomen 3.11 mm.

Holotype ♂ (BISHOP 9066), NE New Guinea, U. Watut, SW, 1100–1600 m, 30.IV.1968, J. L. Gressitt coll.

Chinessa forfex Kormilev, new species Fig. 157–158.

♀. Macropterous. Elongate ovate, granulate; scutellum, connexivum and tergum VII posteriorly, punctured; genae produced beyond tip of antennal segment II; PE-VII long, pointed, more than 2 × as long as paratergites. Postocular tubercles vertically bifid, produced posteriorly; anterolateral angles of pronotum produced anteriorly and inward, rounded apically; fore disc of pronotum glossy, with exception of 2(1 + 1) high, inner ridges, which are granulate; median sulcus deep; connexiva II and III fused; paratergites conical, produced beyond trapezoidal segment IX. Spiracles II to VII ventral and not visible from above, VIII latero-terminal. Labium not reaching hind border of labial groove, which is closed posteriorly.

Measurements: head ♀ 57:36, ♂ 50:35; relative length of antennal segments I to IV: ♀ 16:15:17.5:16, ♂ 15:13:16:17; pronotum ♀ 43:83, ♂ 38:77, fore lobe narrower than hind lobe ♀ 69:83, ♂ 63:77; scutellum ♀ 42:50, ♂ 36:45; abdomen ♀ 105:105, ♂ 105:84; hypopygium 15:25.

Color: dark ferrugineous; labium and tarsi yellowish brown.

Total length: ♀ 9.07, ♂ 8.32 mm; width of pronotum ♀ 2.96, ♂ 2.75 mm; width of abdomen ♀ 3.75, ♂ 3.00 mm.

Holotype ♀ (BISHOP 9067), New Guinea, Papua, Keparra-Sengi nr Kokoda, 600 m, 28.III. 1956, J. L. Gressitt coll.

Allotype ♂ (BISHOP), NE New Guinea, Wau, Big Wau Ck., 1200 m, XII.1965, J. & M. Sedlacek coll.

Chinessa armata Kormilev, new species Fig. 159–160.

♀. Macropterous. Elongate ovate, granulate; connexiva II and III fused.

Similar to *C. fulgida* n. sp., but head shorter and wider, anterior process with genae more diverging, reaching slightly beyond tip of antennal segment I; labium almost reaching hind border of labial groove, which is closed posteriorly; postocular tubercles not so strongly bifid, directed posteriorly. Anterolateral angles of pronotum shorter, less produced, but still converging inward; fore disc of pronotum scabrous, with 2(1 + 1) round, high, granulate ridges; PE-angles less protruding, PE-VII much shorter, acute, produced as far as paratergites; the latter conical, slightly produced beyond small, posteriorly rounded segment IX. Spiracles II to VII ventral and not visible from above, VIII latero-terminal.

Measurements: head 43:34; relative length of antennal segments I to IV: 17:16:20:17; pronotum 37.5:75, fore lobe narrower than hind lobe 59:75; scutellum 37:46; abdomen 104:100 across segment IV.

Color: ferrugineous; membrane black.

Total length: 7.75 mm; width of pronotum 2.68 mm; width of abdomen 3.57 mm.

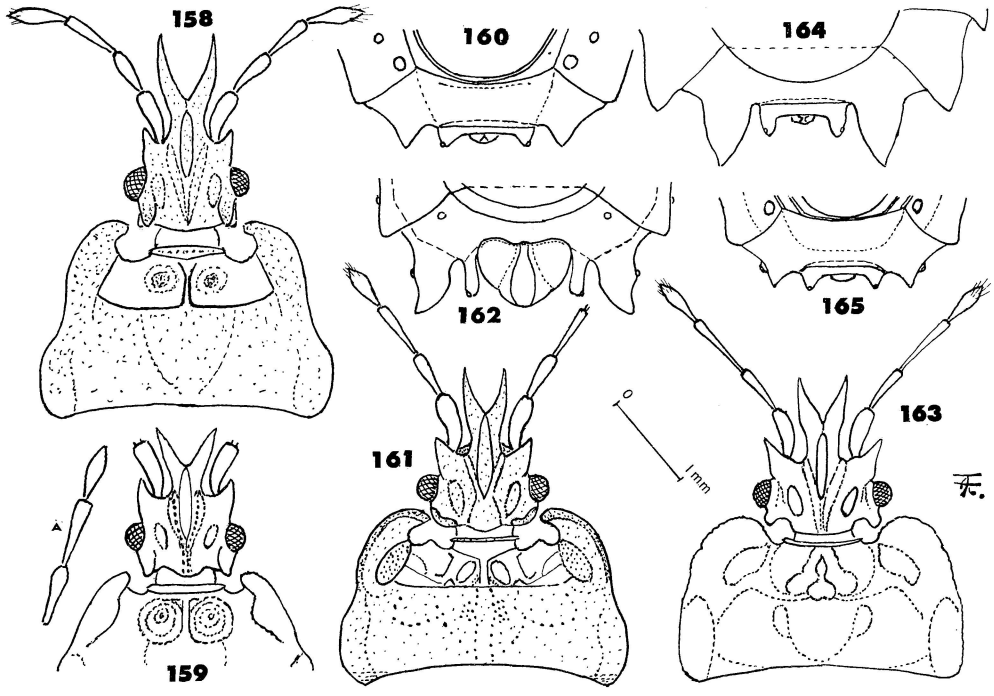


Fig. 158–165. 158, *Chinessa forfex* n. sp., ♀, head and pronotum; 159, *C. armata* n. sp., ♀, head and fore lobe of pronotum, A—antenna; 160, same, tip of abdomen from above; 161, *C. bellicosa* n. sp., ♂, head and pronotum; 162, same, tip of abdomen from above; 163, *C. horribilis* n. sp., ♀, head and pronotum; 164, same, tip of abdomen from above; 165, *C. modesta* n. sp., ♀, tip of abdomen from above.

Holotype ♀ (Bishop 9068), W New Guinea, Boden, 100 m, 11 km SE of Oerberfaren, 7–17. VII.1959, T. C. Maa coll.

Chinessa bellicosa Kormilev, new species Fig. 161–162.

♂. Macropterous. Elongate ovate; head, pronotum with exception of fore disc, scutellum, corium and hypopygium, granulate; connexivum finely punctured and scabrous; fore disc of pronotum flat and glossy, with a few thin sulci.

Related to *C. forfex* n. sp., but anterior process (genae) shorter, reaching only to 1/2 of antennal segment II; antenniferous tubercles divergent (with parallel sides in *C. forfex*); postocular tubercles rounded and reflexed posteriorly; anterolateral angles of pronotum similar to *C. forfex*, but fore disc smooth, without high, inner ridges, and with a few thin sulci; inner ridges are only marked. PE-VI not acute, but still strongly protruding; PE-VII are quite different: twice sinuate exteriorly and convex interiorly, produced beyond tip of cordate hypopygium; partergites cylindrical, slightly shorter than hypopygium; the latter with a median ridge arising from the base and extending to the tip. Spiracles II to V ventral and not visible from above, VI and VII sublateral and visible from above, VIII latero-terminal. On sternum VII are placed 2(1 + 1) shiny tubercles.

Measurements: head 46:37, relative length of antennal segments I to IV: 16:15:17:14; pronotum 35:80, fore lobe narrower than hind lobe 70:80; scutellum 38:50; abdomen 111:92 across segment IV; hypopygium 18:27.

Color: ferrugineous; fore disc of pronotum black and glossy; scutellum piceous; membrane dark brown,

black laterally, shiny.

Total length: 8.51 mm; width of pronotum 2.86 mm; width of abdomen 3.29 mm.

Holotype ♂ (BISHOP 9069), NW New Guinea, Wisselmeren, Enarotadi, 1750–1900 m, 11.VIII. 1962, J. Sedlacek coll.

Chinessa bispiniceps (Walker), 1873

Crimia bispiniceps Walker, 1873, *Cat. Hem. Het. Brit. Mus.* **7:** 20.

Artabanus bispiniceps: Distant, 1902, *Ann. Mag. Nat. Hist.* (7) **9:** 359.

Chinessa bispiniceps: Usinger & Matsuda, 1959, Class. Aradidae, p. 270.

In the collections of the Bishop Museum there are 2 specimens of this species from New Guinea.

Chinessa horribilis Kormilev, new species Fig. 163–164.

♀. Macropterous. Elongate ovate, lateral border of abdomen lobulate; head, pronotum and corium granulate; scutellum transversely rugose, connexivum finely punctured.

Anterior process of head strongly forked, reaching 2/3 of antennal segment II; postocular tubercles directed posteriorly and rounded; antennae thin; labium reaching hind border of labial groove, which is closed posteriorly.

Anterolateral angles of pronotum strongly expanded, rounded and raised, produced anteriorly beyond postocular tubercles; lateral borders parallel, converging anteriorly; lateral notch absent; fore disc with 4(2 + 2) rugose ridges and deep and wide median sulcus, hind disc granulate.

Scutellum with straight, carinate lateral borders and thin median carina.

Hemelytra reaching 2/3 of tergum VII; apical angle of corium blunt, apical border twice sinuate.

Abdomen ovate; PE-angles II to VI progressively more salient, acute, directed posteriorly; their anterior borders convex, posterior straight; PE-VII forming large, acute lobes directed posteriorly and produced 2 × as far as paratergites. The latter conical, produced far beyond small, rounded posteriorly, segment IX. Spiracles II to VII ventral and not visible from above, VIII terminal. Connexiva II and III fused.

Measurements: head 45:38, relative length of antennal segments I to IV: 15:14:20:15; pronotum 35:80, fore lobe narrower than hind lobe 76:80; scutellum 37:52; abdomen 107:111 across segment IV.

Color: black, shiny; base of antennal segment I, labium, coxae, trochanters, tarsi and hind borders of sterna III to V, ferrugineous.

Total length: 7.79 mm; width of pronotum 2.86 mm; width of abdomen 4.00 mm.

Holotype ♀ (BISHOP 9070), NE New Guinea, Mt Missim, 1600–2000 m, 21–24.IX.1964, M. Sedlacek coll.

Chinessa modesta Kormilev, new species Fig. 165–166.

♀. Macropterous. Elongate ovate; head and pronotum sparsely, finely granulate; scutellum concentrically rugose, connexivum punctured.

Anterior process of head relatively shorter, reaching basal 1/3 of antennal segment II; postocular tubercles produced posteriorly and rounded. Labium reaching hind border of closed labial groove.

Anterolateral angles of pronotum short, slightly produced forward and reaching hind border of postocular tubercles; lateral notch shallow, sinuate; lateral borders of hind lobe subparallel, slightly convex. Fore disc with 4(2 + 2) small, but high ridges.

Scutellum with straight, carinate lateral borders; median carina poorly discernible, rugose.

Hemelytra reaching hind border of tergum VI, apical angle of corium acute, apical border slightly sinuate interiorly.

Abdomen ovate; PE-angles II to V barely protruding; VI more protruding, rounded; VII produced posteriorly as small, acute lobes, reaching tips of paratergites; the latter conical, 2 × as long as small, posteriorly rounded segment IX. Spiracles II to VI ventral and not visible from above, VII sublateral and visible, VIII terminal. Connexiva II and III fused.

Measurements: head 37:33, relative length of antennal segments I to IV: 14:11:15:14; pronotum 30:63, fore lobe narrower than hind lobe 50:63; scutellum 30:38, abdomen 81:81 across segment IV.

Color: dark ferrugineous to ferrugineous; labium and tarsi yellowish brown.

Total length: 6.46 mm; width of pronotum 2.25 mm; width of abdomen 2.89 mm.

Holotype ♀ (BISHOP 9071), NE New Guinea, Maprik, 160 m, 14.X.1957, W. Peters coll.

Chinessa lobulata Kormilev, new species Fig. 167–169.

♂. Macropterous. Elongate ovate; head and pronotum sparsely, finely granulate; scutellum transversely rugose, rest of body finely punctured, scabrous, covered with relatively long, sparse bristles.

Anterior process of head strongly forked, reaching 3/4 of antennal segment II; postocular tubercles small, acute, directed laterally, not reaching outer borders of eyes.

Anterolateral angles of pronotum expanded anteriorly and laterally, and rounded, produced anteriorly and reaching postocular tubercles. Lateral borders convex, converging anteriorly and posteriorly; lateral notch absent. Fore disc with 4(2 + 2) semiobliterated ridges, hind disc granulate.

Scutellum with lateral borders carinate and slightly sinuate, median carina thin, granulate.

Hemelytra reaching hind border (♂), or fore border (♀) of tergum VII; apical angle of corium angularly rounded, apical border sinuate interiorly.

Abdomen ovate, with PE-angles forming progressively increasing lobes with blunt tips, directed obliquely posteriorly; PE-VII forming large, angular, slightly diverging lobes, produced far beyond hypopygium, or segment IX respectively. Paratergites (♂) cylindrical, reaching tip of globose hypopygium, which is transversely depressed across middle. Paratergites (♀) conical, slightly produced beyond truncate segment IX. Spiracles II to VI ventral and not visible from above, VII lateral, VIII terminal (♂), or dorsolateral (♀). Connexiva II and III fused.

Measurements: head ♂ 36:33, ♀ 37:36; relative length of antennal segments I to IV: ♂ 12:11:15:12.5, ♀ 13:12.5:17:15; pronotum ♂ 28:63, ♀ 34:72; scutellum ♂ 28:35, ♀ 33:42; abdomen ♂ 80:75, ♀ 94:93, both across segment IV.

Color: piceous, partially dark ferrugineous.

Total length: ♂ 6.39, ♀ 7.00 mm; width of pronotum ♂ 2.25, ♀ 2.57 mm; width of abdomen ♂ 2.68, ♀ 3.32 mm.

Holotype ♂ (BISHOP 9072), NW New Guinea, Wisselmeren, Enarotadi, 1750–1900 m, 11.VIII. 1962, J. Sedlacek coll.

Allotype ♀ (BISHOP), same locality, 1850–2050 m, 5–6.VIII.1962, J. Sedlacek coll.

Paratype 1 ♀ (BISHOP), same locality, 1850–1900 m, 19.VII.1962, J. Sedlacek coll.

Chinessa paralobulata Kormilev, new species Fig. 170–171.

♀. Macropterous. Elongate; head densely, pronotum sparsely granulate; scutellum and corium transversely rugose, connexivum very finely punctured.

Related to *C. lobulata* n. sp., but anterior process of head longer and narrower, reaching 3/4 of antennal segment II; postocular tubercles larger, directed posteriorly and rounded posteriorly.

Anterolateral angles of pronotum strongly expanded anteriorly and laterally, produced anteriorly beyond hind border of postocular tubercles; lateral notch distinct, angular; lateral borders of hind lobe convex, rounded and incised medially. Fore disc with 2(1 + 1) flattened inner ridges and with 2(1 + 1) almost obliterated outer ridges; hind disc granulate.

Scutellum with carinate lateral borders and thin median carina.

Hemelytra reaching 1/2 of tergum VII; apical angle of corium acute, apical border twice slightly sinuate.

Abdomen with PE-angles II to V angularly protruding, with blunt tips; PE-VI acute, directed obliquely posteriorly; PE-VII produced posteriorly as long, pointed lobes 2-1/2 × as long as paratergites; the latter conical, slightly longer than truncate segment IX. Spiracles II to VI ventral, progressively nearer border, VII sublateral and visible from above, VIII dorso-terminal. Connexiva II and III semifused.

Measurements: head 37:33, relative length of antennal segments I to IV: 12:11:14.5:13; pronotum 30:68, fore lobe narrower than hind lobe 59:68; scutellum 35:42; abdomen 83:82 across segment IV.

Color: piceous; connexivum and legs dark ferrugineous; labium yellowish brown.

Total length: 6.61 mm; width of pronotum 2.43 mm; width of abdomen 2.93 mm.

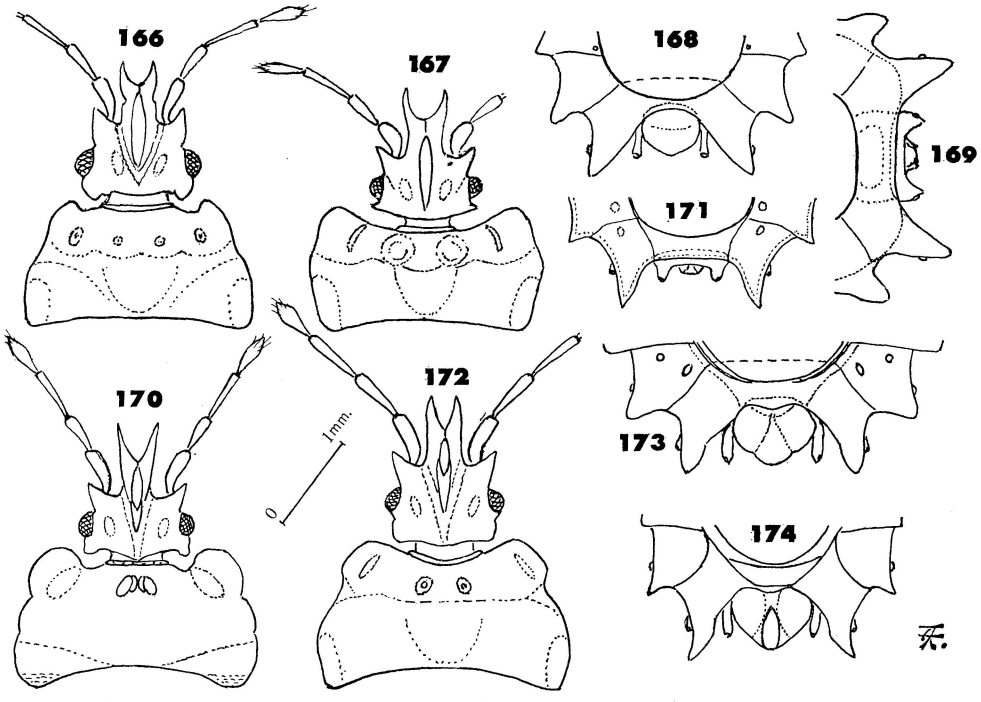


Fig. 166–174. 166, *Chinessa modesta* n. sp., ♀, head and pronotum; 167, *C. lobulata* n. sp., ♂, head and pronotum; 168, same, tip of abdomen from above; 169, same, ♀, tip of abdomen from above; 170, *C. paralobulata* n. sp., ♀, head and pronotum; 171, same, tip of abdomen from above; 172, *C. lobuliventris* n. sp., ♂, head and pronotum; 173, same, tip of abdomen from above; 174, *C. acuminata* n. sp., ♂, tip of abdomen from above.

Holotype ♀ (BISHOP 9073), NW New Guinea, Wisselmeren, Enarotadi, 1750–1800 m, 11.VIII. 1962, J. Sedlacek coll.

Chinessa lobuliventris Kormilev, new species Fig. 172–173.

♂. Macropterous. Elongate ovate; head, pronotum, corium partially, and hypopygium, finely granulate; scutellum, rest of corium, and connexivum, roughly punctured, scabrous. Pilosity extremely short, longer on legs.

Related to *C. paralobulata* n. sp., but genae parallel, reaching basal 1/3 of antennal segment II; postocular borders angular, neither produced laterally, nor posteriorly.

Anterolateral angles of pronotum slightly expanded and produced anteriorly, reaching postocular borders, medially obliquely truncate; lateral notch sinuate, lateral borders of hind lobe convex, rounded. Fore disc with 2(1 + 1) low and small inner ridges, and 2(1 + 1) semiobliterated outer ridges.

Scutellum with straight, carinate lateral borders; tip angular, not carinate; disc scabrous, very deeply punctured and finely, irregularly rugose.

Hemelytra reaching 1/2 of tergum VII; apical angle of corium acute, apical border straight.

Abdomen ovate; PE-angles II to VI progressively produced into apically rounded lobes, exterior borders of connexiva II to VI convex, posterior straight; PE-VII produced posteriorly as long, apically rounded lobes, longer than paratergites; the latter cylindrical as long as cordate hypopygium. Spiracles II to V ventral, progressively nearer border, VI sublateral and slightly visible from above, VII also sublateral, but more visible from above, VIII latero-terminal 2(1 + 1) tubercles on sternum VII low, concolorous.

Measurements: head 41:38, relative length of antennal segments I to IV: 15:13:17:13; pronotum 30:70, fore lobe narrower than hind lobe 58:70; scutellum 35:48; abdomen 93:92 across segment V; hypopygium 16:24.

Color: black; labium, coxae, trochanters and tarsi, dark ferrugineous.

Holotype ♂ (BISHOP 9074), Bismark Arch., New Britain, Gazelle Pen., Gaulim, 130 m, 23–28. X.1962, J. Sedlacek coll.

Chinessa quadridentata Kormilev, new species Fig. 176–177.

♀. Macropterous. Elongate ovate; head, pronotum and scutellum granulate.

Related to *C. paralobulata* n. sp., but anterior process of head have subparallel sides, reaching 1/2 of antennal segment II; postocular tubercles directed posteriorly, rounded posteriorly. Labium reaching hind border of labial groove which is open posteriorly.

Anterolateral angles of pronotum expanded anteriorly and laterally, and rounded, reaching to collar; lateral notch angular; lateral borders of hind lobe convex, converging anteriorly and less so posteriorly. Fore disc with 4(2 + 2) small ridges, and with 4(2 + 2) callosities placed in front of and behind inner ridges; hind disc roughly, but sparsely, granulate.

Scutellum with lateral borders sinuate and highly carinate; median carina narrow, but high; disc granulate.

Hemelytra reaching hind border of tergum VI.

Abdomen elongate ovate; PE-angles II to V protruding, angular; PE-VI forming acute lobes directed obliquely posteriorly, PE-VII also acute, directed posteriorly, produced 3 × as long as paratergites. The latter conical, segment IX tricuspidate, shorter than paratergites. Spiracles II to V ventral, placed far from border; VI and VII sublateral and visible from above, VIII dorsolateral.

Measurements: head 40:31, relative length of antennal segments I to IV: 13:11:16:12; pronotum 28:64, fore lobe narrower than hind lobe 50:64; scutellum 30:36; abdomen 83 to the tip of segment IX, or 95:80 to the tip of PE-VII and across segment IV respectively.

Color: ferrugineous; head and clavus piceous; callosities of fore lobe of pronotum, and membrane, black.

Total length: 7.80 mm; width of pronotum 2.56 mm; width of abdomen 3.20 mm.

Holotype ♀ (BISHOP 9075), NW New Guinea, Wisselmeren, Enarotadi, 1850–1900 m, 30.VII. 1962, J. Sedlacek coll.

Chinessa acutissima Bloete, 1965

Chinessa acutissima Bloete, 1965, *Zool. Verh.* **75:** 17.

DISTRIBUTION: New Guinea.

In the collections of the Bishop Museum there are 2 specimens of this species, also from New Guinea: 1 ♂, NE New Guinea, Feramin, 120–150 m, and 1 ♀, NE, Eliptamin Valley, 1200–1350 m, both collected by W. W. Brandt in 1959.

Chinessa necopinata Kormilev, new species Fig. 178–179.

♂. Macropterous. Elongate ovate; head, pronotum, scutellum, and corium, granulate.

Anterior process of head moderately long, forked, reaching basal 1/3 of antennal segment II; postocular borders almost rectangular, neither produced laterally, nor posteriorly; vertex moderately raised and finely granulate. Labium slightly produced beyond hind border of labial groove, which is open posteriorly.

Anterolateral angles of pronotum moderately expanded and rounded, produced anteriorly beyond collar and laterally, crenulate; lateral notch distinct, sinuate; lateral borders of hind lobe convex, converging anteriorly and posteriorly. Fore disc with 4(2 + 2) ridges, of which inner ridges are higher; hind disc granulate.

Scutellum with lateral borders carinate, disc granulate.

Hemelytra reaching 1/2 of tergum VII; apical angle of corium acute, apical border sinuate interiorly; disc granulate and transversely rugose.

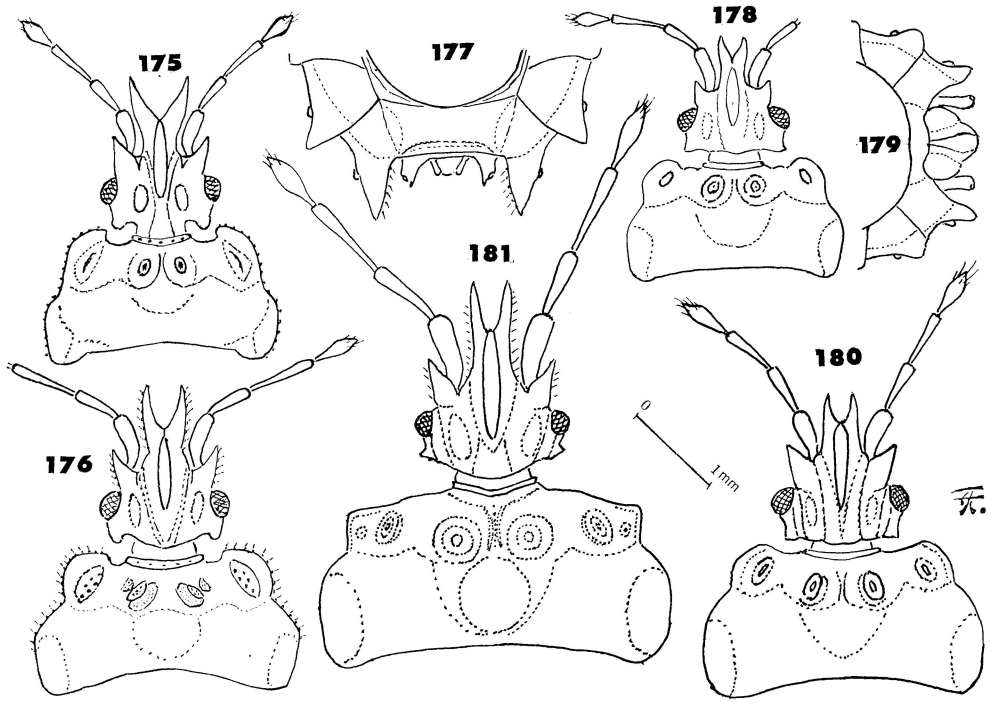


Fig. 175–181. 175, *Chinessa acuminata* n. sp., ♂, head and pronotum; 176, *C. quadridentata* n. sp., ♀, head and pronotum; 177, same, tip of abdomen from above; 178, *C. necopinata* n. sp., ♂, head and pronotum; 179, same, tip of abdomen from above; 180, *C. robusta* n. sp., ♂, head and pronotum; 181, *C. ferox* n. sp., ♀, head and pronotum.

Abdomen long, with parallel sides; PE-angles II to V protruding, angular; PE-VI forming small, rounded lobes; PE-VII produced posteriorly, as far as hypopygium, or paratergites, their outer borders sinuate, inner borders convex. Paratergites cylindrical, hypopygium cordate. Spiracles II to V ventral, progressively nearer border; VI and VII sublateral and visible from above, VIII terminal. Connexiva II and III fused. Tubercles on sternum VII (♂) oblique and very prominent.

Measurements: head ♂ 32:32, ♀ 37:31, relative length of antennal segments I to IV: ♂ 12.5:11:15:13, ♀ 12:11:15:13; pronotum ♂ 28:60, ♀ 28:59; fore lobe narrower than hind lobe ♂ 50:60, ♀ 47:59; scutellum ♂ 31:35, ♀ 33:35; abdomen ♂ 86:68, ♀ 75:73; hypopygium 15:23.

Color: piceous to black; base of membrane whitish; labium brown.

Total length: ♂ 7.04, ♀ 6.92 mm; width of pronotum ♂ 2.40, ♀ 2.36 mm; width of abdomen ♂ 2.72, ♀ 2.92 mm.

Holotype ♂ (BISHOP 9076), NW New Guinea, Wisselmeren, Enarotadi, 1800–1900 m, 25.VII. 1962, J. Sedlacek coll.

1 ♀, which I tentatively refer to this species, was not made an allotype, because it has an abnormally long head, and an abbreviated abdomen; it was collected at Bodem (W New Guinea), 11 km SE of Oerberfaren, 7–17.VII. 1959, by T. C. Maa. (BISHOP).

Chinessa acuminata Kormilev, new species Fig. 174–175.

♂. Macropterous. Closely related to *C. acutissima* Bloete, 1965, from which it may be separated by a relatively shorter antennae, longer genae, reaching tip of antennal segment II; by more protruding PE-angles

II to V, longer PE-VI and larger hypopygium. Tubercles on sternum VII (♂) are still discernible, whereas in *C. acutissima* they are almost obliterated.

Postocular tubercles large, granulate, rounded posteriorly and directed posteriorly; labium reaching hind border of labial groove, which is closed posteriorly. Anterolateral angles of pronotum rounded, directed anteriorly and very slightly inward, reaching hind border of postocular tubercles. Fore disc with 4(2 + 2) moderately large ridges, hind disc roughly punctured. Scutellum with straight, carinate lateral borders; median carina transversely rugose, disc irregularly carinate and sparsely granulate. Hemelytra extending to 1/2 of tergum VII (♂), or slightly over fore border of tergum VII (♀); apical angle of corium blunt, apical border sinuate interiorly. Abdomen with PE-angles II to V slightly, but distinctly protruding; PE-VI produced as acute angles directed obliquely posteriorly; PE-VII forming long, acute, slightly diverging lobes, with exterior borders sinuate and interior convex, produced beyond tip of hypopygium. Paratergites (♂) cylindrical, reaching 5/6 of hypopygium, the latter cordate. PE-VII (♀) acute, with straight sides, produced 2 × as long as paratergites; the latter conical, longer than tricuspidate segment IX. Connexiva II and III semifused. Spiracles II to V ventral, progressively nearer border, VI and VII sublateral and visible from above, VIII terminal.

Measurements: head ♂ 42:32, ♀ 45:35; relative length of antennal segments I to IV: ♂ 12.5:11:15:12.5, ♀ 15:14:19:15; pronotum ♂ 30:63, ♀ 32:73, fore lobe narrower than hind lobe ♂ 53:63, ♀ 57:73; scutellum ♂ 32:44, ♀ 36:43; abdomen ♂ 95:72 across segment V, ♀ 95:91 across segment IV; hypopygium 15:25.

Color: ferrugenous; membrane black, labium, trochanters and tarsi yellowish brown to brown.

Total length: ♂ 6.89, ♀ 7.57 mm; width of pronotum ♂ 2.25, ♀ 2.51 mm; width of abdomen ♂ 2.57, ♀ 3.25 mm.

Holotype ♂ (BISHOP 9077), New Guinea, Papua, Kiunga, Fly River, 26–30.VII.1957, W. W. Brandt coll.

Allotype ♀ (BISHOP), NW New Guinea, Wisselmeren, Enarotadi, 1850–1900 m, 30.VII. 1962, J. Sedlacek coll.

Chinessa robusta Kormilev, new species Fig. 180, 182.

♂. Macropterous. Related to *C. necopinata* n. sp., but larger, the antenniferous tubercles also larger and diverging; PE-VI acute, not rounded, and PE-VII also acute; hypopygium is different.

Anterior process of head reaching 2/5 of antennal segment II; postocular tubercles rectangular, neither produced anteriorly, nor laterally; labium produced beyond hind border of labial groove, which is open posteriorly.

Anterolateral angles of pronotum rounded and produced anteriorly slightly beyond collar; lateral notch angular, lateral borders of hind lobe convex, rounded. Fore disc with 4(2 + 2) ridges, of which inner ridges are higher. Scutellum with carinate lateral borders and thin median carina. Hemelytra extended to hind border of tergum VII. Abdomen with PE-angles II to V angularly protruding, PE-VI forming acute lobes, PE-VII produced posteriorly as acute lobes as far as hypopygium. Paratergites cylindrical, shorter than hypopygium, the latter cordate, with a stout median ridge on apical 1/2. Spiracles II to V ventral, progressively nearer border, VI and VII sublateral and visible from above, VIII latero-terminal. Connexiva II and III fused.

Measurements: head 42:39, relative length of antennal segments I to IV: 13:13:16:15; pronotum 33:77, fore lobe narrower than hind lobe 64:77; scutellum 37:46; abdomen 95:86 across segment IV; hypopygium 14:25.

Color: black; antennae, femora and tibiae piceous; labium, coxae, trochanters and tarsi, dark brown.

Total length: 7.71 mm; width of pronotum 2.75 mm; width of abdomen 3.07 mm.

Holotype ♂ (BISHOP 9078), NW New Guinea, Wisselmeren, Enarotadi, 1850 m, 5–9.VIII.1962, J. Sedlacek coll.

Chinessa ferox Kormilev, new species Fig. 181, 183.

♀. Macropterous. Elongate ovate, granulate; connexivum interiorly roughly punctured; pilosity distinct, bristles short and erect.

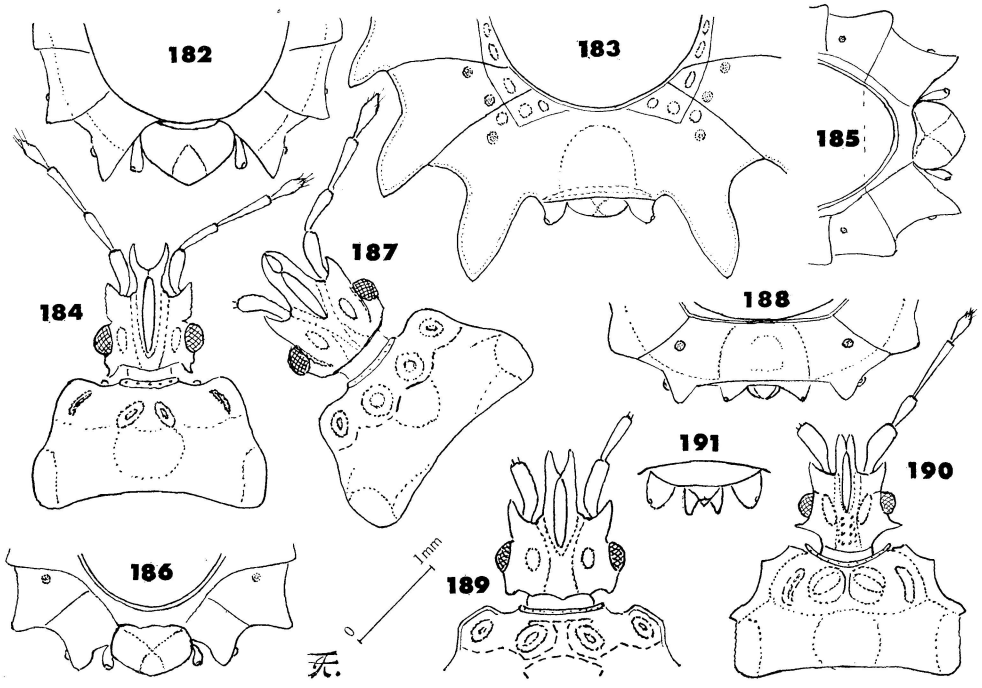


Fig. 182–191. 182, *Chinessa robusta* n. sp., ♂, tip of abdomen from above; 183, *C. ferox* n. sp., ♀, tip of abdomen from above; 184, *C. gressitti* n. sp., ♂, head and pronotum; 185, same, tip of abdomen from above; 186, *C. iniqua* n. sp., ♂, tip of abdomen from above; 187, same, head and pronotum; 188, same, ♀, tip of abdomen from above; 189, *C. i. ceramensis* n. ssp., ♀, head and pronotum; 190, *Usingerida angulata* n. sp., ♀, head and pronotum; 191, same, genital segments from above.

Head with anterior process deeply forked, genae correct and acute, reaching 1/2 of antennal segment II; antenniferous tubercles acute, diverging; postocular tubercle small, placed at a distance from eyes, directed laterally, not reaching outer borders of the latter. Vertex granulate. Antennae slender and long, relative length of antennal segments I to IV: 20:18:26:19; labium produced beyond hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as its maximum width; anterolateral borders almost straight and receding laterally; anterolateral angles rectangular, neither produced anteriorly, nor laterally; lateral notch angular, lateral borders of hind lobe slightly convex, rounded. Fore lobe with 4(2 + 2) high, rounded ridges; hind disc granulate.

Scutellum with lateral borders carinate, straight; disc strongly raised medially, sloping anteriorly, and laterally. Basolateral angles with stout tubercles.

Hemelytra reaching hind border of tergum VI; apical angle of corium blunt, apical border twice sinuate, and twice raised.

Abdomen ovate; lateral borders lobulate and somewhat reflexed; lobes from II to VI progressively longer and larger, their anterior borders convex, posterior borders straight; discs of connexiva raised posteriorly, and depressed anteriorly, deeply punctured. PE-VII produced into long, pointed lobes, convex exteriorly and almost straight interiorly, extending far beyond paratergites and small, rounded apically segment IX. Paratergites small, conical, produced slightly beyond tip of segment IX. Spiracles II to VII ventral and not visible from above, VIII latero-terminal.

Femora strongly denticulate.

Measurements: head 53:41; pronotum 40:98, fore lobe narrower than hind lobe 82:98; scutellum 40:60; abdomen 130:135 across segment V.

Color: black; antennae, anterolateral angles of pronotum, lobes of connexivum, labium and legs, dark ferrugineous; membrane dirty yellow, black at base and apically.

Total length: 9.71 mm; width of pronotum 3.50 mm; width of abdomen 4.82 mm.

Holotype ♀ (BISHOP 9079), NE New Guinea, Wau, 1150–1600 m, 9.II.1968, J. Sedlacek coll.

Chinessa gressitti Kormilev, new species Fig. 184–185.

♂. Macropterous. Related to *C. necopinata* n. sp., but genae more curved in front of clypeus, reaching slightly beyond base of antennal segment II; postocular tubercles dentiform, directed posteriorly; fore borders of pronotum laterad of collar with 2(1 + 1) tubercles inferiorly, but visible from above; anterolateral angles rounded and very slightly produced anteriorly, as far as collar; lateral borders subparallel, converging and slightly sinuate anteriorly. Fore disc with 4(2 + 2) well developed ridges, hind disc roughly granulate.

Scutellum roughly punctured and with a few granules; median ridge high, transversely rugose. Hemelytra extending to 1/2 of tergum VII; apical border of corium slightly sinuate interiorly, apical angle blunt; disc sparsely granulate.

Abdomen ovate; PE-angles II to V protruding, rounded; PE-VI more protruding, rounded; PE-VII produced posteriorly as pointed lobes, almost reaching tip of hypopygium. Paratergites cylindrical, reaching 3/4 of hypopygium, the latter cordate, slightly depressed at base, with a moderately stout median ridge on apical 1/2. Connexiva II and III fused. Spiracles II to VI ventral and not visible from above; VII sublateral and visible, VIII terminal.

Labium reaching hind border of labial groove, which is closed posteriorly.

Measurements: head 36:37.5, relative length of antennal segments I to IV: 14:12:15:12.5; pronotum 32:64, fore lobe narrower than hind lobe 52:64; scutellum 31:38; abdomen 86:76 across segment IV; hypopygium 13:19.

Color: very dark ferrugineous; labium, trochanters and tarsi, yellowish brown.

Total length: 6.64 mm; width of pronotum 2.28 mm; width of abdomen 2.75 mm.

Holotype ♂ (BISHOP 9080), New Guinea, Papua, Daradae nr Javarere, Musgrove R., 100 m, 4.X.1958, J. L. Gressitt coll.

It is a pleasure to dedicate this species to its collector, Dr J. Linsley Gressitt, Head of the Department of Entomology at the B. P. Bishop Museum, Honolulu, Hawaii, who collected so many new species of Aradidae.

Chinessa iniqua Kormilev, new species Fig. 186–188.

♂. Macropterous. Related to *C. gressitti* n. sp., but postocular borders angular, forming an obtuse angle, neither produced anteriorly, nor laterally; genae closed anteriorly (♂), or slightly divergent (♀); antenniferous tubercles convex exteriorly and slightly diverging. Labium long, produced beyond hind border of labial groove, which is open posteriorly.

Pronotum with anterolateral angles carinate and rounded, neither produced anteriorly, nor laterally; lateral borders slightly convex at humeri, slightly sinuate and converging anteriorly. Fore disc with 4(2 + 2) ridges, of which the inner ones are higher; hind disc granulate.

Scutellum with thinly carinate, straight, lateral borders; median ridge inflated on basal 1/2, thin on apical 1/2. Hemelytra reaching 1/2 of tergum VII (♂), or hind border of tergum VI (♀); apical angle of corium acute, apical border twice sinuate.

Abdomen widening backward (♂), or ovate (♀); PE-angles II to V slightly protruding; PE-VI forming subtriangular lobes with rounded tips (♂), or angularly rounded (♀); PE-VII produced posteriorly as short lobes with convex borders (♂), slightly shorter than tip of hypopygium, or short, conical, as long as paratergites (♀). Paratergites (♂) short, cylindrical, slightly shorter than cordate hypopygium; the latter obliquely, transversely depressed, with a short, stout, median ridge on apical 1/2. Spiracles II to VI ventral, placed close to

border (♂), not so close in ♀; VII sublateral and visible from above, VIII terminal. Paratergites (♀) conical, slightly longer than posteriorly rounded segment IX. Connexiva II and III fused.

Femora strongly denticulate posteriorly.

Measurements: head ♂ 37:35, ♀ 40:38; relative length of antennal segments I to IV: ♂ 12.5:12.5:16:15, ♀ 15:15:18:16; pronotum ♂ 32: 70, ♀ 35:79; ratio width of fore lobe/width of hind lobe ♂ 53:70, ♀ 58:79; scutellum ♂ 32:42, ♀ 36:50; abdomen ♂ 87:78, ♀ 100:102, both across segment V; hypopygium 14:24.

Color: piceous to black; basal 1/2 of antennal segment I and apical of IV, posterior borders of connexiva III to VI, middle of corium, coxae and trochanters, dark brown to brown; labium and tarsi yellowish brown; basal border of membrane whitish.

Total length: ♂ 6.78, ♀ 7.93 mm; width of pronotum ♂ 2.50, ♀ 2.83 mm; width of abdomen ♂ 2.78, ♀ 3.61 mm.

Holotype ♂ (BISHOP 9081), W New Guinea, Bodem, 100 m, 11 km SE Oerberfaren, 7–17.VII. 1959, T. C. Maa coll.

Allotype ♀ (BISHOP), NW New Guinea, Ifar, Cyclops Mts, 300–500 m, 28–30.VI.1962, J. L. Gressitt coll. (Malaise trap).

Paratypes: 1 ♂, collected with allotype; 1 ♂, same locality, 23–25.VI.1962, J. L. Gressitt coll.

Chinessa iniqua ceramensis Kormilev, new subspecies Fig. 189.

♀. Macropterous. Similar to preceding species, but postocular tubercles slightly produced posteriorly and rounded; anterolateral angles of pronotum carinate, very slightly expanded and obliquely truncate. Spiracles II to VI more distant from border, VII sublateral and visible from above, VIII latero-terminal. Labium longer, almost touching fore border of prosternum. Other characters as in *C. iniqua* n. sp.

Measurements: head 43:36, relative length of antennal segments I to IV: 15:15:19:15; pronotum 35:76, ratio width of fore lobe/width of hind lobe 58:76; scutellum 35:48; abdomen 101:101.

Color: ferrugineous; membrane piceous, whitish at base.

Total length: 7.71 mm; width of pronotum 2.71 mm; width of abdomen 3.61 mm.

Holotype ♀ (Bishop 9082), Ceram, Piroe, I.1909, F. Muir coll.

Genus **Barcinus** Stål, 1873

This genus has 8 species distributed from Bhoutan and Malacca to Bismarck Arch.; half of them were recorded from New Guinea.

Barcinus laminiferus (Walker), 1873

Crimia laminifera Walker, 1873, *Cat. Hem. Het. Brit. Mus.* **7:** 16.

Barcinus laminiferus: Distant, 1902, *Ann. Mag. Nat. Hist.* (7) **9:** 359.

DISTRIBUTION: New Guinea.

In the collections of the Bishop Museum there are a few specimens from New Guinea.

Barcinus papuensis Usinger & Matsuda, 1959

Barcinus papuensis Usinger & Matsuda, 1959, Class. Aradidae, p. 279.

DISTRIBUTION: New Guinea.

In the collections of the Bishop Museum there are specimens from New Guinea.

Barcinus productus Usinger & Matsuda, 1959

Barcinus productus Usinger & Matsuda, 1959, Class. Aradidae, p. 281.

DISTRIBUTION: Bismarck Arch., and New Guinea.

In the collections of the Bishop Museum there are specimens from New Guinea.

Barcinus truncatus Kormilev, 1955

Barcinus truncatus Kormilev, 1955, *Ann. Mag. Nat. Hist.* (12) **8:** 196.

DISTRIBUTION: New Guinea.

In the collection of the Bishop Museum are specimens from New Guinea and Bismarck Arch. (New Britain and New Ireland).

Genus **Wuiessa** Hsiao, 1964

This genus was established for a single species from South China. The generic description is not very detailed, but I think that a specimen from New Guinea belongs to this genus, though not to the type species. I propose to name the new species *Wuiessa minor* n. sp.

Wuiessa minor Kormilev, new species

♂. Ovate, widening posteriorly until segment V, then narrowed; covered with very short, curled hairs.

Head almost as long as width across eyes (25:26); anterior process robust, constricted laterally and incised anteriorly, reaching 3/4 of antennal segment I; antenniferous tubercles dentiform, diverging, reaching basal 1/3 of antennal segment I; eyes large, semiglobose, protruding; postocular borders unarmed, strongly converging posteriorly; vertex with a double row of fused tubercles. Antennae thin, relative length of antennal segments I to IV: 10:8:10.5:10.5. Labium inserted far from tip of head; labial atrium closed, slit-like; labium reaching base of head, labial groove shallow and open posteriorly.

Pronotum 1/2 as long as its maximum width across humeri (25:52); fore lobe narrower than hind lobe (42.5:52); collar slender, sinuate anteriorly; anterior borders laterad of collar sinuate; anterolateral angles slightly expanded, rounded, slightly produced anteriorly and more so laterally; interlobal notch deep, rounded; humeri raised, lateral borders parallel, converging anteriorly; hind border almost straight. Fore disc with 2(1 + 1) high tubercles and laterad of them with 2(1 + 1) small and low ridges; interlobal depression deep and wide, hind disc granulate.

Scutellum triangular, shorter than basal width (21:29); lateral borders finely carinate, slightly sinuate at apical 1/3; tip rounded. Disc with a high and stout, almost pentagonal, median ridge, occupying most of disc.

Hemelytra reaching 1/2 of tergum VI; basolateral borders of corium straight, carinate; apical angle rounded; apical border convex outside, sinuate inside; membrane without veins.

Abdomen longer than maximum width across segment V (64:62); lateral borders diverging from II to V, then receding; PE-angles II to VI angular, protruding; PE-VII very small, angular, produced posteriorly. Connexivum wide, flat; midlateral areas widely exposed. Paratergites clavate, reaching 1/2 of hypopygium; the latter shorter than wide (17:21), with median ridge on apical 1/2, protruding beyond hind border, of genital capsule. Spiracles II to VII ventral, placed far from border, VIII lateral and visible from above.

Venter. Posterior borders of sterna II and III straight, IV to VI progressively sinuate; sternum VII medially longer than sterna V and VI together (16:13).

Legs. Unarmed; claws with arolia.

Color: piceous, partially reddish brown; connexiva II to VI with yellow posterior border; labium and tarsi yellowish brown.

Total length: 5.52 mm; width of pronotum 2.08 mm; width of abdomen 2.48 mm.

Holotype ♂ (BISHOP 9354), New Guinea, Papua, Fly R., Kiunga, 36 m, VIII.1969, J. Sedlacek coll.

Wuiessa minor n. sp. is much smaller than *W. unica* Hsiao, 1964, the head is slightly shorter than its width across eyes, and the anterolateral angles of the pronotum are less produced forward.

Genus **Crimia** Amyot & Serville, 1843

This small genus, containing only 3 species, was much misused by Walker, who wrongly attributed most of his new species of Aradidae to it.

Crimia inermis Kormilev, 1953

Crimia inermis Kormilev, 1953, *Verh. Naturf. Ges. Basel* **64:** 336.

DISTRIBUTION: Java, Philippines.

In the collection of the Bishop Museum there are 2 specimens from Philippines (Misamis).

Crimia tuberculata Amyot & Serville, 1843

Crimia tuberculata Amyot & Serville, 1843, Hémiptères, p. 305.

DISTRIBUTION: Java, Borneo.

In the collection of the Bishop Museum there are 2 specimens from North Borneo.

Genus **Usingerida** Kormilev, 1955

Ten species were attributed to this genus distributed from Russian Far East (Amur, Ussuri), SE China, Burma and Ceylon, across Indonesia to New Guinea and Bismarck Arch., to which I am now adding one species more, from New Guinea.

Usingerida carinata Hsiao, 1964

Usingerida carinata Hsiao, 1964, *Ata Ent. Sinica* **13:** 595 (604).

DISTRIBUTION: SE China (Yunnan), Viet Nam.

In the collections of the Bishop Museum there is a specimen of this species from Viet Nam.

Usingerida flavosetosa Bloete, 1965

Usingerida flavosetosa Bloete, 1965, *Zool. Verh.* **75:** 25.

DISTRIBUTION: New Guinea.

The original description by Bloete is vague, but he also included 2 drawings, which are helpful. In the collections of the Bishop Museum there is one ♂ specimen, from NE New Guinea, Wum, Upper Jimmi V., 840 m, which seems to belong to this species, although it is much smaller, only 6.0 mm, whereas Bloete indicated 7-2/3 mm for his type, also a ♂.

Usingerida tuberosa Hsiao, 1964

Usingerida tuberosa Hsiao, 1964, *Acta Ent. Sinica* **13:** 594 (603).

DISTRIBUTION: S. China (Yunnan), Hainan I.

In the collections of the Bishop Museum there is a specimen from Hainan I., S. China.

Usingerida angulata Kormilev, new species Fig. 190–191.

♀. Macropterous. Elongate ovate, densely granulate, granules with very short, erect setae.

Head as long as width across eyes (25:25); anterior process with parallel sides, deeply incised anteriorly, genae porrect, blunt apically, much longer than clypeus, reaching 3/4 of antennal segment I. Antenniferous tubercles acute, diverging; eyes semiglobose, protruding; postocular tubercles thin, acute, produced beyond outer borders of eyes. Antennae thin, relative length of antennal segments I to IV: 13:8.5:16:9; labium not reaching hind border of labial groove, which is open posteriorly; labial atrium slit-like, closed.

Pronotum less than 1/2 as long as maximum width (25:59); fore lobe narrower than hind lobe (45:59); collar thin, high and granulate; anterior borders laterad of collar produced anteriorly as far as collar; anterolateral angles rectangular, expanded, directed obliquely anteriorly; lateral borders anterior to and posterior to them sinuate; lateral borders of hind lobe straight, parallel, terminating with a strong tooth anteriorly; hind border sinuate medially. Fore lobe with a deep and narrow median sulcus, flanked by 2(1 + 1) large, high, rounded ridges, and laterad of them with 2(1 + 1) lower and narrower ridges; hind lobe depressed in middle, raised at humeri.

Scutellum triangular, shorter than its basal width (27:33); lateral borders carinate and sinuate before apex; tip rounded and incised; disc with a stout median ridge, in the shape of a "croix de Lorraine," disc transversely rugose.

Hemelytra reaching slightly over fore border of tergum VII; basolateral border reflexed, apical angle of corium acute, apical border slightly convex exteriorly, slightly sinuate interiorly; disc scabrous.

Abdomen ovate; longer than maximum width across segment IV (86:75); connexivum wide, midlateral glabrous areas also wide; PE-angle angular, protruding; PE-VII forming small, rounded, slightly diverging lobes; exterior borders of connexiva II to VI slightly convex, VII sinuate; tergum VII transversely rugose. Paratergites large, rounded posteriorly, not produced beyond tip of a tricuspidate segment IX, which has valves longer than oviduct. Spiracles II to VI ventral, placed far from border, VII and VIII lateral and visible from above.

Color: ferrugineous; postocular tubercles, anterolateral angles of pronotum, PE-angles of connexiva and round callous spots on the same, tips of paratergites and valves, yellow.

Total length: 6.56 mm; width of pronotum 2.36 mm; width of abdomen 3.00 mm.

Holotype ♀ (BISHOP 9083), NE New Guinea, Tsenga, Upper Jimmi V., 1200 m, 15.VII.1955, J. L. Gressitt coll.

U. angulata n. sp. stands apart in the genus with its curious, angular anterolateral angles of the pronotum.

Genus **Pseudoartabanus** Esaki & Matsuda, 1952

Pseudoartabanus was established for the reception of a single species from Taiwan, *Pseudoartabanus formosanus* Esaki & Matsuda, 1952. Usinger & Matsuda (1959: 163) only mentioned this genus, without including it in the key for Old World Mezirinae, because they had no specimens available. *P. formosanus* is macropterous, the second species described herewith is brachypterous, but brachypterism is incipient, that is, an abbreviation of the membrane and lack of the hind wings, with the hind lobe of the pronotum abbreviated.

Pseudoartabanus brachypterus Kormilev, new species Fig. 192–193.

♂. Brachypterous. Elongate with parallel sides; head, pronotum, scutellum and hypopygium granulate.

Head as long as width across eyes (32:32); anterior process long and thin, genae much longer than clypeus and contiguous in front of the latter, reaching 3/5 of antennal segment I; antenniferous tubercles strong, dentiform, with convex outer borders. Eyes semiglobose, strongly protruding, but not pedunculate. Postocular borders slightly convex, strongly converging, but without postocular spines. Antenniferous tubercles separated from central portion of head by deep sulci, similar sulci separate vertex from infraocular callosities, the latter raised medially; vertex with a double row of granules. Antennae long, relative length of antennal segments I to IV: 19:10.5:20.5:12.5. Labial atrium slit-like, closed; labium arising far from the tip of head and reaching fore border of prosternum; labial groove deep and wide, open posteriorly.

Pronotum trapezoidal, shorter than maximum width (27.5:52.5); collar thin, but high, granulate, straight anteriorly; anterior borders laterad of collar slightly sinuate; anterolateral angles rectangular with rounded tips; lateral borders of fore lobe parallel; lateral notch deep, angular; lateral borders of hind lobe slightly convex, subparallel, converging anteriorly; hind border slightly sinuate. Fore disc with a shallow median sulcus, flanked by 4(2 + 2) semiobliterated ridges; interlobal depression deep; hind disc abbreviated, raised at humeri and declivous anteriorly in middle, roughly granulate.

Scutellum triangular, shorter than basal width (27:32); lateral borders carinate, sinuate medially; tip angularly rounded; disc with a high median ridge, roughly granulate laterally.

Hemelytra consisting of clavus, corium and abbreviated membrane without veins, reaching slightly over hind border of tergum III; apical border of corium rounded, apical angle rectangular with rounded tip. Hind wings absent, fore wings not functional.

Abdomen with subparallel sides, much longer than maximum width across segment VI; tergum II abbreviated, III very long, 1-1/2 times as long as IV; tergum VII strongly raised posteriorly. Connexivum narrow, midlateral glabrous areas not included in the disc; lateral borders from II to VI straight, slightly diverging posteriorly; PE-angles II to V not protruding, VI protruding, VII forming rounded, reflexed lobes; exterior

borders of connexivum VII straight, posterior sinuate. Paratergites sturdy and short, conical, reaching 2/3 of a large, cordate hypopygium; the latter shorter than wide (16:25), with a median ridge extending from base to tip. Spiracles II to VII ventral, placed rather close to border, VIII terminal.

Prosternum shallowly sulcate medially. Metathoracic scent-gland openings large, curved, placed behind and above middle acetabulae. Sternum VII (♂) with 2(1 + 1) ovate depressions.

Legs. Unarmed, fore tibiae with a small comb subapically on interior surface.

Color: ferrugineous, partially piceous.

Total length: 7.00 mm; width of pronotum 2.10 mm; width of abdomen 2.32 mm.

Holotype ♂ (BISHOP 9084), Taiwan, Puli, 20.XI.1954, Chin Hwei coll.

P. brachypterus n. sp. is closely related to *P. formosanus* Esaki & Matsuda, 1952, but is slightly smaller, the posterior lobe of the pronotum is abbreviated, the hemelytra has a reduced membrane, and the hind wings are absent.

Genus **Odontonotus** Kormilev, 1955

Odontonotus Kormilev has 4 species distributed in SE Asia from Taiwan and S. China to Malacca.

Odontonotus annulipes Hsiao, 1964

Odontonotus annulipes Hsiao, 1964, *Acta Ent. Sinica* **13:** 592 (603).

DISTRIBUTION: S. China (Yunnan), Viet Nam.

In the collections of the Bishop Museum there is a specimen from Viet Nam.

Odontonotus maai Kormilev, 1955

Odontonotus maai Kormilev, 1955, *Quart. J. Taiwan Mus.* **8:** 179.

DISTRIBUTION: SE China, Viet Nam.

In the collections of the Bishop Museum there is a specimen from Viet Nam.

Odontonotus oviventris Kormilev, 1957

Odontonotus oviventris Kormilev, 1957, *Ann. Mag. Nat. Hist.* (12) **10:** 265.

DISTRIBUTION: Malaysia (Singapore, Selangor).

In the collections of the Bishop Museum there is a specimen from Malaya (Selangor).

Genus **Dolichothyreus** Usinger & Matsuda, 1959

This genus has a single species recorded from Borneo (Sarawak).

Dolichothyreus stigmatus Usinger & Matsuda, 1959

Dolichothyreus stigmatus Usinger & Matsuda, 1959, Class. Aradidae, p. 291.

In the collections of the Bishop Museum there is a specimen from Viet Nam (Dilinh).

Genus **Aphelocoris** Usinger & Matsuda, 1959

This small genus had only 4 species from New Guinea and Sumatra. I am now adding 3 more, from New Guinea and Bismarck Arch.

Aphelocoris quadridentatus Kormilev, new species Fig. 198.

♀. Macropterous. Ovate, convex on ventral side, partially finely granulate; body without pilosity, antennae and legs with extremely short pubescence.

Head as long as width across eyes; clypeus short, but longer than genae, or antenniferous tubercles, reaching basal 1/4 of antennal segment I; antenniferous tubercles dentiform, blunt, slightly divaricating. Eyes moderately protruding. Postocular borders converging in a slightly convex line. Vertex depressed medially, with 2(1 + 1) parallel carinae in the depression. Antennae long and thin, more than 2 × as long as head width across eyes. Labium arising from a swollen, slit-like atrium, which is slightly seen from above in front

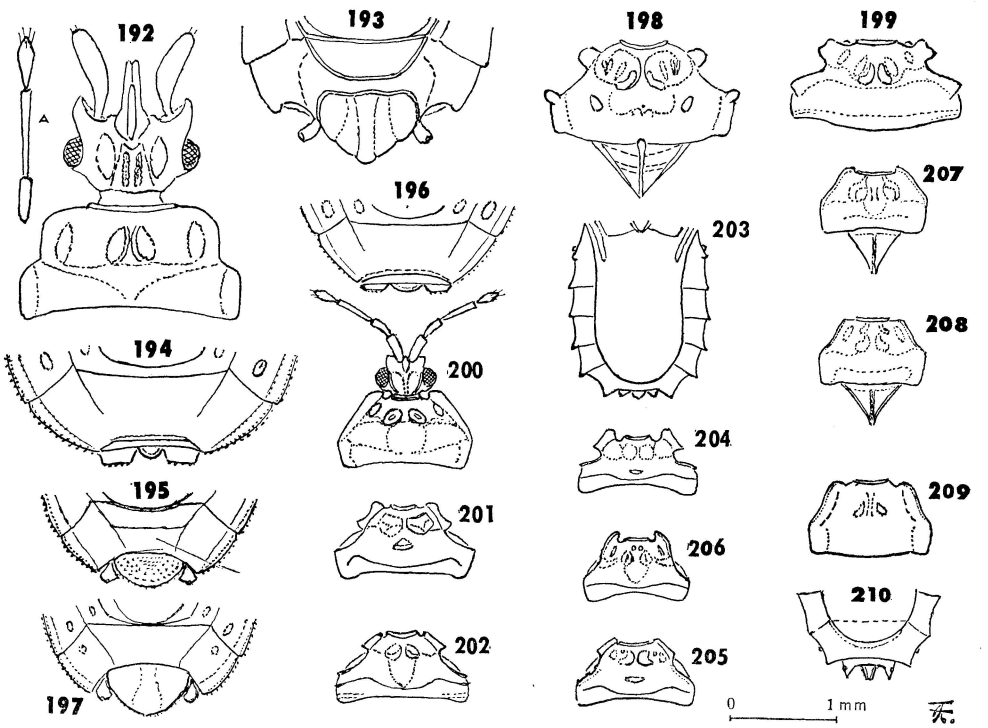


Fig. 192–210. 192, *Pseudoartabanus brachypterus* n. sp., ♂, head and pronotum, A—antenna; 193, same, tip of abdomen from above; 194, *Neuroctenus serrulatus* Stål, 1870, ♀, lectotype, tip of abdomen from above; 195, same, ♂, tip of abdomen from above; 196, *N. hyalinipennis* n. sp., ♀, tip of abdomen from above; 197, *N. hyalinipennis australicus* n. ssp., ♂, tip of abdomen from above; 198, *Aphelocoris quadridentatus* n. sp., ♀, pronotum and scutellum; 199, *A. alatus* n. sp., ♀, pronotum; 200, *Chiastoplonia lobata* n. sp., ♀, head and pronotum; 201, *Acoryphocoris oviventris* n. sp., ♂, pronotum; 202, *A. denticulatus* n. sp., ♀, pronotum; 203, same, abdomen from above; 204, *A. angusticornis* n. sp., ♀, pronotum; 205, *A. antennatus* n. sp., ♂, pronotum; 206, *A. brevicornis* n. sp., ♀, pronotum; 207, *Glochocoris pusillus* n. sp., ♀, pronotum and scutellum; 208, *G. truncatus* n. sp. ♀, pronotum and scutellum; 209, *G. acutus* n. sp., ♀, pronotum; 210, same, tip of abdomen from above.

of clypeus; labial groove narrow, open posteriorly; labium reaching hind border of labial groove.

Pronotum 1/2 as long as maximum width; collar thin; anterolateral angles produced upward as high, rounded lobes; interlobal notch deep, sinuate; humeri produced into small, tuberculiform teeth; 2(1 + 1) more vertical teeth placed on hind disc laterad of the median, smooth portion; hind border slightly convex. Fore disc with a deep depression medially, flanked by 4(2 + 2) ridges, fused in pairs. Hind disc smooth in the middle anteriorly, granulate elsewhere.

Scutellum small, 1/2 as long as width at base; lateral borders carinate, straight, carinae tapering posteriorly; basal border raised; median carina high and thin, produced anteriorly over the hind border of pronotum; disc transversely rugose.

Hemelytra almost reaching hind border of tergum VII; corium short, reaching tip of scutellum exteriorly, not reaching it interiorly; basolateral border carinate, carina tapering posteriorly; apical angle obtuse, apical border slightly convex, rounded; membrane large, without veins.

Abdomen ovate, as long as maximum width across segment III; PE-angles II to VI upturned, progressively

larger and higher; PE-VII acute, slightly diverging, produced beyond tips of paratergites. Paratergites short, conical, not reaching tip of a strongly declivous segment IX. Spiracles placed on tubercles, II lateral and visible from above, III to VI ventral, and not visible from above, VII ventral, but slightly visible from above, VIII terminal.

Legs. Unarmed.

Measurements: head 17:17, relative length of antennal segments I to IV: 10:9:12.5:8; pronotum 23:46, ratio width of fore lobe/width of hind lobe 29:46; scutellum 12.5:25; abdomen 48:48.

Color: ferrugineous; membrane slightly lighter at base.

Total length: 4.12 mm; width of pronotum 1.84 mm; width of abdomen 1.92 mm.

Holotype ♀ (BISHOP 9085), NE New Guinea, Wau, Morobe Distr., 1050 m, 7.I.1963, J. Sedlacek coll.

Paratype 1 ♀, same locality, 1200 m, 17.XII.1961, L. W. Quate coll.

A. quadridentatus n. sp. may be easily separated from other species by the 4(2 + 2) teeth on the hind lobe of the pronotum.

Aphelocoris confusus Kormilev, new species

♂. Macropterous. Related to *A. quadridentatus* n. sp., but smaller, median depression on vertex without 2(1 + 1), parallel carinae; anterolateral angles of pronotum vertically raised and obliquely truncate anteriorly, not rounded; hind disc without 4(2 + 2) teeth, only humeri angularly raised; hind border of corium slightly sinuate; PE-angles III to VI less salient, PE-VII shorter than paratergites. Hypopygium caudal in position, deeply inserted and shifted ventrally, barely visible from above.

Measurements: head ♂ 13:13, ♀ 12.5:12.5; relative length of antennal segments I to IV: ♂ 7.5:6:10:6, ♀ 7.5:6:9:6.5; pronotum ♂ 18:34, ♀ 20:38; ratio width of fore lobe/width of hind lobe ♂ 23:34, ♀ 24:38; scutellum ♂ 9.5:20, ♀ 10:21; abdomen ♂ 36:33, ♀ 40:39.

Color: ferrugineous; membrane with a large, light spot at base.

Total length: ♂ 3.20, ♀ 3.44 mm; width of pronotum ♂ 1.36, ♀ 1.52 mm; width of abdomen ♂ 1.32 across segment II, ♀ 1.56, across segment III.

Holotype ♂ (BISHOP 9086), W New Guinea, Nabire, 5–50 m, 25.VIII.–2.IX.1962, jungle along stream, H. Holtmann coll.

Allotype ♀, (BISHOP), Bismarck Arch., Manus, Rossum, 6 km SE Lorengau, 180 m, XII.1959, T. C. Maa coll.

Aphelocoris alatus Kormilev, new species Fig. 199.

♀. Macropterous. Ovate, convex on ventral side; head and partially pronotum granulate; granules scarce and rather obsolete.

Head almost as long as width across eyes. Anterior process (clypeus) reaching slightly beyond tips of antenniferous tubercles; the latter blunt, with subparallel, slightly convex outer borders. Eyes large, but only moderately protruding. Vertex depressed medially, slightly raised laterad of depression. Antennae strong, more than 2 × as long as head's width across eyes. Labium reaching hind border of labial groove, which is open posteriorly; labial atrium swollen, slit-like.

Pronotum 1/2 as long as maximum width; collar thin; anterolateral angles strongly expanded and wing-like reflexed; interlobal notch very deep, rounded; humeri angularly raised anteriorly, straight and finely serrate posteriorly; hind border convex medially. Fore disc with a deep median sulcus, failing to reach collar; a few raised callosities between median sulcus and wing-like projections. Interlobal depression deep; hind disc scabrous, with scattered, sparse granules; smooth along hind border.

Scutellum small; lateral borders carinate, straight, carinae tapering backward; median carina thin, disc transversely rugose.

Hemelytra produced beyond tergum VII, reaching 1/2 of paratergites. Corium not reaching tip of scutellum interiorly, reaching over fore border of connexivum II exteriorly; basolateral border of corium rounded

and slightly reflexed; apical angle rectangular, apical border slightly sinuate. Membrane large, without veins.

Aldomen as long as maximum width across segment II; connexivum narrow; PE-angles II to VI progressively more protruding, angular; PE-VII produced like angular, slightly raised lobes, almost reaching tips of paratergites; exterior borders of connexiva II to VI progressively more sinuate, connexivum VII deeply sinuate. Paratergites conical, produced far beyond segment IX, the latter placed at lower level. Spiracles placed on tubercles, II lateral and clearly visible from above, III to VII ventral and not visible from above, VIII terminal.

Sterna II to VI inflated posteriorly, depressed along fore border.

Legs. Unarmed.

Measurements: head 14:15, relative length of antennal segments I to IV: 8.5:7:10.5:7; pronotum 21:40, width of fore lobe narrower than width of hind lobe 27:40; scutellum 12:20; abdomen 41:40 across segment II.

Color: ferrugineous; membrane brown, transparent.

Total length: 3.68 mm; width of pronotum 1.60 mm; width of abdomen 1.60 mm.

Holotype ♀ (BISHOP 9087), NE New Guinea, Wau, 1300 m, 24.XI.1963, J. L. Gressitt coll.

Genus **Chiastoplonia** China, 1930

Various species, previously referred to this genus, were transferred by Usinger & Matsuda into a new genus *Acoryphocoris* (1959: 294). In their key for the Old World Mezirinae (1959: 198) they indicated the main characters separating these two genera as open labial atrium, short corium, and membrane without veins, for *Chiastoplonia;* and a closed labial atrium, corium produced backward exteriorly, and distinct veins, for *Acoryphocoris*. Actually some species of *Acoryphocoris* also have an open, or partially open, atrium, so that the main character for the separation of these 2 genera should be the corium not produced exteriorly in *Chiastoplonia*, and produced in *Acoryphocoris*. Whether this is enough to maintain *Acoryphocoris* as a genus should be decided by a revision of both genera.

The genus *Chiastoplonia* is distributed from Laos to Samoa.

Chiastoplonia pauperula Kormilev, new species

♂. Macropterous. Elongate ovate, granulate.

Head shorter than width across eyes. Anterior process very short, not reaching tips of antenniferous tubercles; the latter small, slightly converging, reaching basal 1/3 of antennal segment I. Eyes large, semiglobose. Postocular tubercles blunt, almost reaching outer borders of eyes; vertex with V-form rows of tubercles; infraocular carinae absent. Antennae long and strong, 2-1/2 × as long as head's width across eyes; labial atrium open, labium reaching hind border of labial groove, which is open posteriorly.

Pronotum 1/2 as long as wide; collar tiny; lateral borders carinate from anterolateral angles to beginning of humeri, a small tubercle placed in the middle of fore lobe border; humeri not carinate. Hind border almost straight. Fore disc with median sulcus, flanked by 4(2 + 2) ridges, of which the inner one is larger and higher. Hind disc roughly granulate.

Scutellum with straight, carinate, lateral borders; tip angular; median carina high and thin, disc transversely rugose.

Hemelytra reaching basal border of hypopygium; clavus reaching tip of scutellum, corium is shorter interiorly and exteriorly; basolateral border of corium carinate, apical border truncate.

Abdomen longer than maximum width across segment IV; PE-angles II to VI tuberculiform, protruding; PE-VII rectangular with rounded tips, produced to small, cylindrical paratergites. Hypopygium small, caudal in position, reaching 1/2 of paratergites. Spiracles II and III lateral and visible from above, IV sublateral, V to VII ventral, placed close to margin, VIII terminal. Connexivum narrow, connexiva II and III fused.

Hind border of sterna III to V inflated, raised; fore portion of the same depressed.

Legs. Unarmed.

Measurements: head 9:11, relative length of antennal segments I to IV: 7:5:9:6; pronotum 13.5:27.5, width of fore lobe/width of hind lobe 18:27.5; scutellum 10:14; abdomen 38:30; hypopygium 3:4.

Color: ferrugineous; membrane brown.

Holotype ♂ (BISHOP 9088), Laos, Ban Van Heue, 20 km E of Phou-kow-kue, 1–15.V.1965, J. A. Rondon coll.

C. pauperula n. sp. is related to *C. chinai* Kormilev, 1955, from S. China, but may be separated from it by the antennal segment I being shorter than III (7:9), and the anterolateral borders of the pronotum with a small tubercle in the middle.

Chiastoplonia lobata Kormilev, new species Fig. 200.

♀. Macropterous. Scabrous, but without granulation.

Head distinctly shorter than width across eyes; anterior process almost as long as antenniferous tubercles; the latter obliquely truncate anteriorly, parallel exteriorly, reaching basal 1/3 of antennal segment I; eyes large, semiglobose; postocular tubercles thin, adherent to eyes, not reaching outer border of the latter; infraocular carinae high, converging posteriorly; vertex with V-form rows of granules. Antennae stout, more than 2 × as long as head's width across eyes. Labial atrium open; labium reaching hind border of labial groove, which is open posteriorly.

Pronotum less than 1/2 as long as maximum width; collar very thin; anterolateral angles expanded, rounded and reflexed, produced anteriorly and inward, forming rounded lobes; lateral notch absent, lateral borders of hind lobe subparallel, slightly converging posteriorly; hind border slightly sinuate. Fore disc with median sulcus, flanked by 2(1 + 1) high, round ridges, and more laterad with 2(1 + 1) small and low ridges. Hind disc twice (1 + 1) depressed laterad of a round, median portion.

Scutellum with lateral borders carinate, straight, tip incised; median carina with 3 transverse carinae: 1, short, at base, 2nd the longest medially, and 3rd, short at 2/3 of disc; the latter scabrous.

Hemelytra reaching hind border of tergum VII; basolateral border of corium straight, reflexed; apical angle almost rectangular, reaching middle of connexivum II; interior border not reaching tip of clavus, the latter reaching tip of scutellum; membrane large, without veins.

Abdomen longer than maximum width across segment IV; connexivum narrow, segment II and III fused; PE-angles II to VI slightly protruding, PE-VII forming an obtuse angle. Paratergites conical, as long as small segment IX, which is placed at a lower level. Spiracles II lateral and visible from above, III sublateral and slightly visible, IV to VII ventral and not visible from above, VIII terminal.

Sterna III to VI raised and smooth along hind border.

Measurements: head 10:14, relative length of antennal segments I to IV: 7:5:9.5:6; pronotum 15:33, ratio width of fore lobe/width of hind lobe 25:33; scutellum 13:20, abdomen 48:35.

Color: yellowish brown; membrane white at base.

Total length: 3.50 mm; width of pronotum 1.32 mm; width of abdomen 1.40 mm.

Holotype ♀ (BISHOP 9089), NE New Guinea, Lambaeb, Salawaket Range, 900 m, 17.IX.1956, E. J. Ford, Jr. coll.

C. lobata n. sp. is related to *C. pygmaea* China, 1930, from Samoa, but is much larger, the anterolateral angles of the pronotum are expanded and produced anteriorly and inward, and the lateral notch is absent.

Genus **Acoryphocoris** Usinger and Matsuda, 1959

This genus has 5 species, distributed from India and S. China to Philippines and New Guinea. I am now able to add 5 more, from New Guinea, Bismarck Arch. and Solomon Is.

KEY TO *Acoryphocoris* SPECIES FROM NEW GUINEA, BISMARCK ARCH. & SOLOMON IS.

1(2). Connexivum bicolorous, yellow and black.....2
Connexivum concolorous.....4

2(1). Smaller and narrower species; antennae longer, ratio length of antennae/width of head across eyes more than 2.5:1.....3
Larger and wider species; antennae shorter, ratio length of antennae/width of head across eyes 2.2:1. (New Guinea).....**oviventris***
3(2). Antennal segment III 3 × as long as II; PE-VI angles dentiform, strongly protruding; PE-VII 2 × as long as paratergites (♂). (New Guinea).....**angulatus** (Kormilev), 1954
Antennal segment III only 2-1/2 × as long as II; PE-VI angles slightly protruding, angular; PE-VII very slightly produced beyond paratergites (♂). (New Guinea).....**ovatus** (Kormilev), 1954
4(1). PE-angles II to VI dentiform, strongly protruding. (New Guinea).....**denticulatus***
PE-angles II to VI not dentiform, at most forming slightly protruding, acute angles.....5
5(4). Antennae thin; reflexed anterolateral borders of pronotum terminating posteriorly in an acute angle; spiracles II to V lateral, or sublateral, and visible from above. (New Guinea).....**angusticornis***
Antennae thick; reflexed anterolateral borders of pronotum terminating posteriorly in an obtuse angle, or rounded; at most spiracles II to IV lateral, or sublateral, and visible from above.....6
6(5). Antennae long, antennal segment III 2-1/2 × as long as II; reflexed anterolateral borders of pronotum angular; spiracles IV sublateral and visible from above. (New Britain, Solomon Is.).....**antennatus***
Antennae short, antennal segment III only 2 × as long as II; reflexed anterolateral borders of pronotum rounded; spiracles IV ventral and not visible from above. (New Guinea)... ..... **brevicornis***

Acoryphocoris oviventris Kormilev, new species Fig. 201.

♂. Macropterous. Elongate ovate, connexivum bicolorous.

Closely related to *A. ovatus* (Kormilev), 1954, but larger and relatively wider, ratio length/width of the body 2.4:1 (2.7:1 in *ovatus*); antennae relatively shorter, ratio length of antennae/width of head across eyes 2.2:1 (2.5:1 in *ovatus*); reflexed anterolateral borders of pronotum slightly sinuate medially (straight in *ovatus*); PE-VII angles rectangular, produced as far as paratergites, or hypopygium; the latter more vertical (in *ovatus* PE-VII are produced as far as paratergites, but not reaching tip of hypopygium). Spiracles II to III lateral and clearly visible from above, IV sublateral and still visible from above, V and VI ventral and not visible from above, VIII terminal.

Measurements: head 11:14, relative length of antennal segments I to IV: 7:5.5:12.5:6; pronotum 16:35, ratio width of fore lobe/width of hind lobe 21:35; scutellum 12.5:18; abdomen 41:36.5 across segment IV.

Color: dark brown to piceous; corium with exception of tip, connexiva, with exception of fore and hind borders, and paratergites, orange-yellow; tip of corium, fore and hind borders of connexiva, black; antennae ferrugineous; legs yellowish brown; membrane dark brown, yellowish at base and medially.

Total length: 3.50 mm; width of pronotum 1.40 mm; width of abdomen 1.46 mm.

Holotype ♂ (BISHOP 9090), NE New Guinea, Wau, Morobe Distr., 1700 m, 28.I.1963, J. Sedlacek coll.

Acoryphocoris angulatus (Kormilev), 1954

Chiastoplonia angulata Kormilev, 1954, *Philip. J. Sci.* **83**(2): 135.

Acoryphocoris angulatus: Usinger & Matsuda, 1959, Class. Aradidae, p. 294.

DISTRIBUTION: New Guinea.

In the collections of the Bishop Museum there is a specimen from W New Guinea, Waris.

Acoryphocoris ovatus (Kormilev), 1954

Chiastoplonia ovata Kormilev, 1954, *Philip. J. Sci.* **83**(2): 134.

Acoryphocoris ovatus: Usinger & Matsuda, 1954, Class. Aradidae, p. 294.

DISTRIBUTION: New Guinea.

In the collections of the Bishop Museum there are 2 specimens from New Guinea, NE and W, Wau, Morobe Distr. and Bodem.

Acoryphocoris denticulatus Kormilev, new species Fig. 202–203.

♀. Macropterous. Elongate ovate, connexivum concolorous..

Head shorter than width across eyes. Anterior process short, shorter than antenniferous tubercles; the latter dentiform, with parallel outer borders. Eyes moderately convex. Postocular borders converging posteriorly, postocular tubercles absent; vertex with V-form rows of granules, flanked by deep sulci. Antennae strong, more than 2 × as long as width of head across eyes. Labial atrium 1/2 open, labium reaching hind border of labial groove, which is open posteriorly.

Pronotum short and wide; anterolateral borders expanded and reflexed, forming high carinae, blunt anteriorly and acute posteriorly. Interlobal notch deep, sinuate; lateral borders of hind lobe terminating with a high tubercle; another tubercle placed a little lower and further posteriorly; hind border widely sinuate. Fore disc with a deep median sulcus, flanked by 2(1 + 1) large, raised callosities. Hind disc slightly raised in middle anteriorly and with a transverse, sinuate carina extending between humeri.

Scutellum small, lateral borders carinate, tip incised; disc with a raised, transverse median carina; transversely rugose laterad of it.

Hemelytra reaching 2/3 of tergum VII; clavus carinate from both sides, reaching tip of scutellum; corium not reaching tip of clavus interiorly, produced slightly beyond hind border of connexivum II exteriorly; basolateral border of corium reflexed, sinuate exteriorly; apical angle produced far posteriorly as a narrow strip; apical border truncate.

Abdomen ovate. Connexivum moderately wide; connexiva II and III fused; PE-angles II to VII dentiform, progressively more protruding teeth; PE-VII almost reaching tips of paratergites. Tergum VII transversely carinate along hind border, carina raised medially. Paratergites conical, 1/2 as long as segment IX, which is strongly declivous and placed at a lower level. Spiracles placed on tubercles, II lateral, III and VII sublateral and slightly visible from above, IV to VI ventral and not visible from above, VIII terminal.

Sterna III to V raised along hind border, depressed anteriorly.

Legs. Unarmed.

Measurements: head 10:13, relative length of antennal segments I to IV: 8:5:10:6; pronotum 13:31, ratio width of fore lobe/width of hind lobe 20:31; scutellum 13:16; abdomen 39:34 across segment IV.

Color: ferrugineous; labium and tarsi yellowish brown; membrane brown, whitish at base.

Total length: 3.12 mm; width of pronotum 1.24 mm; width of abdomen 1.36 mm.

Holotype ♀ (BISHOP 9091), NW New Guinea, Sentani, 90 m, 16.VI.1959, Berlese, shelf fungus, T. C. Maa coll.

Acoryphocoris angusticornis Kormilev, new species Fig. 204.

♀. Macropterous. Elongate ovate, connexivum concolorous. Similar to *A. denticulatus* n. sp., but smaller, antennae thin and long, more than 2 × as long as width of head across eyes; anterior process reaching tips of antenniferous tubercles; postocular tubercles blunt, reaching outer borders of eyes. Labial atrium open; labium not reaching hind border of labial groove, which is open posteriorly.

Pronotum is similar to that of *A. denticulatus* n. sp., only the reflexed anterolateral borders more produced forward and backward; lateral borders of hind lobe carinate and sinuate between interlobal notch and humeri; transverse carina along hind border more prominent, and humeri without tubercles.

Scutellum similar. Hemelytra reaching hind border of tergum VII. Corium reaching 1/2 of scutellum interiorly, reaching hind border of connexivum II exteriorly.

Abdomen ovate; PE-angles II to VI slightly protruding, acute, but not dentiform; PE-VII acute, reaching tips of paratergites; the latter longer than small segment IX. Spiracles II to IV lateral, V sublateral and slightly visible from above, VI and VII ventral and not visible from above, VIII terminal.

Measurements: head 9:12.5, relative length of antennal segments I to IV: 6:4.5:13:5.5; pronotum 12.5:28, ratio width of fore lobe/width of hind lobe 21:28; scutellum 12:15; abdomen 40:32 across segment IV.

Color: ferrugineous; antennal segment III, labium and tarsi yellowish brown; membrane brown, whitish at base.

Total length: 3.00 mm; width of pronotum 1.12 mm; width of abdomen 1.28 mm.

Holotype ♀ (BISHOP 9092), NW New Guinea, Vogelkop, Fak-Fak, S Coast of Bomberai, 10–100, 3.VI.1959, T. C. Maa coll.

Acoryphocoris antennatus Kormilev, new species Fig. 205.

♂. Macropterous. Elongate ovate, connexivum concolorous.

Similar to *A. angusticornis* n. sp., but antennae thick; anterolateral borders of pronotum reflexed, but not produced forward, more raised backward and blunt, forming an obtuse angle posteriorly; anteromedian elevation of the hind lobe higher. Scutellum with median carina strongly raised in middle, sloping forward and backward. Abdomen is similar, connexiva II and III fused. In the ♂, PE-angles II to VI slightly protruding, acute; PE-VII reaching tips of paratergites; the latter cylindrical, shorter than hypopygium; hypopygium strongly declivous, with a transverse depression at basal 1/3 of disc. In the ♀, PE-angles III to V less protruding, VI and VII slightly protruding; VII acute, almost reaching tips of paratergites, the latter conical, reaching tip of segment IX. Spiracles II and III lateral, IV and VII sublateral and slightly visible from above, V and VI ventral and not visible from above, VIII terminal.

Measurements: head ♂ 9:12, ♀ 11:13.5; relative length of antennal segments I to IV: ♂ 7:5:12.5:5.5, ♀ 8:5.5:14:7; pronotum ♂ 12.5:27.5, ♀ 15:31; ratio width of fore lobe/width of hind lobe ♂ 18:27.5, ♀ 20:31; scutellum ♂ 11:17, ♀ 12:17; abdomen ♂ 38:31, ♀ 44:35 across segment IV; hypopygium 4:6.

Color: dark brown; membrane whitish at base.

Holotype ♂ (BISHOP 9093), Bismarck Arch., New Britain, Gazelle Pen., Upper Warangoi, Illugi, 230 m, 8–11.XII.1962, J. Sedlacek coll.

Allotype ♀ (BISHOP), Bismarck Arch., New Britain, Vudal, SW of Kerawat, 13.XII.1959, T. C. Maa coll.

Paratype 1 ♂ (BISHOP), Solomon Is., New Georgia Group, Buruku, summit of Rendova Pk, 1050 m, 17.VII.1959, J. L. Gressitt coll.

Acoryphocoris brevicornis Kormilev, new species Fig. 206.

♀. Macropterous. Elongate ovate, connexivum concolorous.

Related to *A. antennatus* n. sp., but smaller, antennae relatively shorter, about 2 × as long as width of head across eyes; postocular tubercles acute, reaching outer borders of eyes; vertex with V-shaped rows of tubercles; anterior process reaching tips of antenniferous tubercles. Anterolateral borders of pronotum less expanded, reflexed and finely crenulate, produced forward far beyond collar, and sloping posteriorly, passing into carinate border of hind lobe. Fore disc with 2(1 + 1) small tubercles behind collar, median sulcus behind them, flanked by 2(1 + 1) round ridges, and further laterad with 2(1 + 1) narrow ridges. Hind disc slightly raised and granulate in the middle anteriorly, but without high, sharp elevation of *A. antennatus;* transverse carina along hind border thin and less prominent.

Lateral borders of scutellum carinate and sinuate, tip incised; median carina thin and low, disc transversely rugose. Hemelytra almost reaching hind border of tergum VII; basolateral borders of corium carinate, but low; apical angle rounded, not reaching hind border of connexivum II, apical border oblique and sinuate, not reaching tip of scutellum interiorly.

Abdomen ovate, long; connexivum moderately wide, connexiva II and III fused; PE-angles II to VI slightly protruding, angular; PE-VII small, acute, not reaching tips of paratergites; the latter conical, not reaching tip of a narrow segment IX. Tergum VII raised and carinate along hind border. Spiracles II and III lateral, IV to VI ventral, placed close to border, but not visible from above; VII sublateral and slightly visible from above, VIII terminal.

Measurements: head 8.5:11.5; relative length of antennal segments I to IV: 6:4.5:7.5:6; pronotum 12:25, ratio width of fore lobe/width of hind lobe 17:25; scutellum 10:14.5; abdomen 38:27.5.

Color: yellowish brown; membrane reddish brown, lighter at base.

Total length: 2.96 mm; width of pronotum 1.00 mm; width of abdomen 1.10 mm.

Holotype ♀ (BISHOP 9094), NW New Guinea, Hollandia, 450–500 m, 1–17.VIII.1959, T. C. Maa coll.

Genus **Glochocoris** Usinger and Matsuda, 1959

This genus was separated from *Pictinus* Stål, 1873, on the basis of the concealed spiracles of abdominal segment II. Its 21 species are widely distributed across the Oriental and Australian Regions, from the Seychelles in the west to Micronesia and New Guinea in the east, and from Japan in the north to Australia in the south. Among its species are the smallest in the subfamily Mezirinae. Small and very light insects, they should be easily carried by the wind, so it is very strange that they are not recorded east of New Guinea, where this genus is replaced by the genus *Arbanatus* Kormilev, 1955.

Glochocoris acuminatus (Matsuda & Usinger), 1957

Pictinus acuminatus Matsuda & Usinger, 1957, *Ins. Micronesia* **7**(3): 160.

Glochocoris acuminatus: Usinger & Matsuda, 1959, Class. Aradidae, p. 303.

DISTRIBUTION: W. Carolines, Palau I.

In the collections of the Bishop Museum there is a specimen from Palau Is. (Babelthuap).

Glochocoris granulatus (Matsuda & Usinger), 1957

Pictinus granulatus Matsuda & Usinger, 1957, *Ins. Micronesia* **7**(3): 163.

Glochocoris granulatus: Usinger & Matsuda, 1959, Class. Aradidae, p. 303.

DISTRIBUTION: W. Carolines.

In the collections of the Bishop Museum there are 2 specimens from Yap I.

Glochocoris palauensis (Esaki & Matsuda), 1951

Pictinus palauensis Esaki & Matsuda, 1951, *Mushi* **22**(13): 82.

Glochocoris palauensis: Usinger & Matsuda, 1959, Class. Aradidae, p. 303.

DISTRIBUTION: Palau Is., Philippines, New Guinea.

In the collections of the Bishop Museum there is 1 ♀ from Philippines (Camarines Sur), and 2 ♂♂ from New Guinea (Bulolo R.).

Spiracles VI and VII in ♂ are slightly visible from above, but not in the ♀.

Glochocoris tuberculatus Kormilev, 1960

Glochocoris tuberculatus Kormilev, 1960, *Quart. J. Taiwan Mus.* **13**: 171.

DISTRIBUTION: New Guinea.

In the collections of the Bishop Museum there is a specimen from New Guinea (Wau, Morobe Distr.).

Glochocoris pygmaeus Kormilev, 1960

Glochocoris pygmaeus Kormilev, 1960, *Quart. J. Taiwan Mus.* **13**(3–4): 172.

DISTRIBUTION: New Guinea.

In the collections of the Bishop Museum there are 7 specimens from New Guinea (Lae).

Glochocoris pusillus Kormilev, new species Fig. 207.

♀. Macropterous. Elongate ovate, lateral borders of pronotum very finely serrate.

Head with anterior process triangular, rounded anteriorly and reaching 2/3 of antennal segment I; antenniferous tubercles thick, very short and rounded anteriorly. Eyes moderately protruding. Postocular tubercles very short, blunt, not reaching outer border of eyes; vertex raised, infraocular callosities large, convex. Antennae thick and short, only 1.5 as long as width of head across eyes; antennal segment I very thick with a narrow stem, ratio length/width 4:3; II obovate, almost globose, III and IV tapering toward base. Labial

atrium slit-like; labium reaching base of a wide and deep labial groove, which is closed posteriorly.

Pronotum with anterolateral angles produced forward beyond collar as rounded lobes; lateral borders rounded anteriorly, slightly sinuate in middle and subparallel at humeri; hind border slightly convex. Fore disc with a shallow median sulcus, flanked by 4(2 + 2) low ridges; hind disc very finely granulate.

Scutellum with lateral borders finely carinate and weakly sinuate in middle, median carina T-shaped, thin and low, transverse bar wider.

Hemelytra reaching hind border of tergum VI; corium reaching middle of connexivum III; basolateral border carinate and sinuate exteriorly, apical angle rounded, apical border sinuate interiorly.

Abdomen ovate; connexivum wide and slightly reflexed, connexiva II and III fused; exterior borders of connexiva II to VI straight, VII slightly sinuate; PE-angles not protruding. Paratergites short, conical, diverging, reaching 1/2 of segment IX, the latter declivous. Spiracles III to VI ventral, VII sublateral and slightly visible from above, VIII terminal. Metathoracic scent-gland openings small, but wide open.

Measurements: head 11:11, relative length of antennal segments I to IV: 4:3:5:5; pronotum 13:25, width of fore lobe/width of hind lobe 20:25; scutellum 10:12; abdomen 36:27 across segment IV.

Color: testaceous; connexivum and ventral side lighter, trochanters and tarsi yellow.

Total length: 2.88 mm; width of pronotum 1.00 mm; width of abdomen 1.08 mm.

Holotype ♀ (Bishop 9095), Bismarck Arch., New Britain, Gazelle Pen., Bainings: St Paul's, 350 m, 5.IX.1955, J. L. Gressitt coll.

Glochocoris truncatus Kormilev, new species Fig. 208.

♀. Macropterous. Related to *G. pusillus* n. sp., of similar size, shape and color, but anterior process with parallel sides; antenniferous tubercles conical, short and blunt; postocular borders rounded, without teeth; vertex with V-form rows of granules. Antennae thick, but slightly longer than in preceeding species, antennal segment I clavate; labium reaching base of head, labial groove open posteriorly.

Pronotum truncate anteriorly, anterolateral angles carinate, slightly reflexed and rounded, but not produced forward; lateral borders slightly sinuate before middle, convex at humeri. Fore disc with a shallow median sulcus, flanked by 4(2 + 2) ridges, the inner ones with a round tubercle anteriorly. Hind disc finely granulate, depressed in middle anteriorly. Scutellum with lateral borders finely carinate, sinuate before apex; median carina thin, disc transversely rugose.

Hemelytra reaching 1/2 of tergum VII; corium reaching 2/3 of connexivum III; basolateral borders carinate, straight; apical angle blunt, apical border weakly sinuate interiorly.

Abdomen ovate; lateral borders rounded, PE-angles not protruding. Paratergites small, conical, reaching basal 1/3 of posteriorly rounded segment IX. Spiracles III to VI ventral, VII sublateral and slightly visible from above, VIII terminal. Metathoracic scent-gland openings small, but widely gaping.

Measurements: head 11.5:11, relative length of antennal segments I to IV: 5.5:3:5.5:5.5; pronotum 15:26, ratio width of fore lobe/width of hind lobe 19:26; scutellum 10:14; abdomen 33:27.5.

Color: testaceous; tarsi yellow.

Total length: 2.84 mm; width of pronotum 1.04 mm; width of abdomen 1.10 mm.

Holotype ♀ (Bishop 9096), NW New Guinea, Vogelkop, Fak Fak, S coast of Bomberai, 10–100 m, 12.VI.1959, T. C. Maa coll.

Glochocoris acutus Kormilev, new species Fig. 209–210.

♀. Macropterous. Antennae, head and pronotum finely granulate, connexivum scabrous.

Anterior process of head with parallel sides, rounded anteriorly, reaching 1/2 of antennal segment I; antenniferous tubercles dentiform, blunt. Eyes large, but only slightly protruding. Postocular borders straight, converging, unarmed; vertex granulate. Antennae strong and long, more than twice as long as width of head across eyes. Labium reaching base of head, labial groove open posteriorly.

Pronotum with a raised collar; anterolateral angles slightly expanded, moderately reflexed and rounded; lateral borders of hind lobe subparallel, slightly converging posteriorly; lateral notch deeply sinuate; hind border slightly convex. Fore disc with a deep median sulcus, flanked by 2(1 + 1) small, round ridges; hind disc finely granulate and deeply but finely punctured, punctures arranged in short, transverse rows.

Scutellum almost as long as its basal width; lateral borders finely carinate and sinuate before apex; disc deeply punctured and with a thin median carina extending from basal 1/4 to tip.

Hemelytra reaching 1/2 of tergum VII; basolateral borders of corium carinate and slightly sinuate; apical angle rounded, reaching basal 1/3 of connexivum III; apical border sinuate interiorly, convex exteriorly.

Abdomen ovate; connexivum moderately wide, connexiva II and III fused; PE-angles not protruding; exterior borders of connexiva VI and VII forming together an obtuse angle, exterior border of connexivum VII sinuate, PE-VII extended into small, angular lobes with blunt tips. Paratergites long, spiniform, acute, reaching tip of a long, posteriorly truncate segment IX. Spiracles III to VI ventral, progressively nearer to border, VII sublateral and visible from above, VIII dorsolateral. Metathoracic scent-gland openings large, widely gaping.

Measurements: head 13:12.5, relative length of antennal segments I to IV: 8:5:10:7.5; pronotum 17:28, ratio width of fore lobe/width of hind lobe 22.5:28; scutellum 15:16; abdomen 46:35 across segment IV.

Color: brown; labium and tarsi yellow brown.

Total length: 3.68 mm; width of pronotum 1.12 mm; width of abdomen 1.40 mm.

Holotype ♀ (BISHOP 9097), NE New Guinea, Wau, 1200 m, 19.VIII.1965, J. Sedlacek coll.

Paratype: 1 ♀, (BISHOP), same locality and collector, 13.II.1965.

Genus **Arbanatus** Kormilev, 1955

Arbanatus Kormilev, 1955, *Quart. J. Taiwan Mus.* **8**(3): 180.

Pictinellus Usinger & Matsuda, 1959, Class. Aradidae, p. 288, **New Synonymy.**

Pictinus pacificus China, 1930, the type species of the genus *Pictinellus* Usinger & Matsuda, 1959, is congeneric with *Arbanatus inermis* Kormilev, 1955.

Arbanatus contains 39 species, of which 22 are described in this paper as new. It is distributed in an enormous area from the Malay Peninsula to Tahiti and Rapa I. in southern Pacific, and from southern China to New Caledonia.

Some of the species, particularly *A. parallelus* (Van Duzee), are rather variable in the length of antennae, particularly segment III which in some specimens is longer than indicated by Van Duzee, and the lateral borders of pronotum show all transitions from almost straight to distinctly constricted in the middle; even the size varies from 3.00 to 3.50 mm. Considering that this species is distributed from Samoa to Rapa I., one would expect some localization of subspecies on various islands, but different varieties were collected on the same island in the same lot; I could separate only 1 subspecies, which is on Fiji Is.

Arbanatus philippinensis Kormilev, new species Fig. 211.

♀. Macropterous. Elongate ovate, slightly widening posteriorly; head very finely, pronotum more roughly, granulate.

Head shorter than its width across eyes; anterior process short, with parallel sides, incised anteriorly, reaching 2/5 of antennal segment I; antenniferous tubercles dentiform, short, with parallel outer borders. Eyes large, semiglobose. Postocular borders rounded and granulate, vertex slightly raised, infraocular callosities large. Antennae strong and long, more than 2 × as long as width of head across eyes. Labium reaching base of head, labial groove open posteriorly.

Pronotum with anterior borders laterad of collar truncate and receding, anterolateral angles forming an obtuse angle with blunt tip; lateral borders slightly converging backward posteriorly, strongly converging and slightly sinuate anteriorly, finely serrate. Fore disc with a deep median depression, flanked by 4(2 +2) low, semiobliterated elevations; hind disc granulate.

Scutellum with carinate borders; lateral borders straight, apex angular; median carina moderately high, disc roughly, transversely rugose.

A. philippinensis n. sp. is related to *A. inermis* Kormilev, 1955, from SE China, but is smaller, and the anterolateral angles of pronotum are slightly receding, forming an obtuse angle.

Arbanatus productus (Matsuda & Usinger), 1957, new combination
Pictinus productus Matsuda & Usinger, 1957, *Ins. Micronesia* **7**(3): 157.
Pictinellus productus: Usinger & Matsuda, 1959, Class. Aradidae, p. 290.

DISTRIBUTION: Palau Is., New Guinea.

In the collections of the Bishop Museum there are specimens from Palau (Peleliu I., paratype, also Babelthuap) and New Guinea (Nabira, Vum, Tsenga and Bisianumu).

Arbanatus longicornis Kormilev, new species Fig. 212–213.

♀. Macropterous. Elongate, finely granulate.

Anterior process of head conical, incised anteriorly, reaching 2/5 of antennal segment I; antenniferous tubercles dentiform, diverging; eyes large, semiglobose; postocular borders incised just behind eyes, then rounded; vertex raised and finely granulate; infraocular callosities large, ovate. Antennae long and strong. Labium not reaching hind border of labial groove, which is closed posteriorly.

Anterolateral angles of pronotum acute, produced forward far beyond collar; lateral borders convex anteriorly and posteriorly, constricted in middle. Fore disc with a long and narrow median sulcus, flanked by 2(1 + 1) low elevations, and further laterad with 2(1 + 1) narrow ridges. Hind disc granulate.

Scutellum with carinate lateral borders, which are sinuate before tip; median carina cross-shaped, disc punctured.

Hemelytra reaching hind border of tergum VI; corium reaching hind border of connexivum II exteriorly, or tip of scutellum interiorly; apical angle acute, apical border deeply sinuate interiorly and slightly exteriorly.

Abdomen long, with slightly convex lateral borders; connexiva II and III fused; exterior borders of connexiva II to VI straight, VII slightly sinuate; PE-angles III to VI barely protruding, PE-VII forming large, rounded lobes reaching base of segment IX. Paratergites large, rounded posteriorly, produced almost twice as far as tricuspidate segment IX. Spiracles II and VIII lateral, III to VI ventral, placed near the border, VII sublateral, but not visible from above.

Measurements: head 15.5:14.5, relative length of antennal segments I to IV: 9:6:13:6; pronotum 17:30, ratio width of fore lobe/width of hind lobe 24:30; scutellum 16:18; abdomen 65:36.

Color: testaceous; fore half of exterior borders and hind borders of connexiva III to VII yellowish brown; membrane whitish at base.

Total length: 4.64 mm; width of pronotum 1.20 mm; width of abdomen 1.44 mm.

Holotype ♀ (BISHOP 9099), SE New Guinea, Papua, Bisianumu, E of Port Moresby, 500 m, 7.VI.1955, Primary Forest, J. L. Gressitt coll.

Paratype 1 ♀, Solomon Is., Buka I., Gagan, 40 m, 15.VI.1956, J. L. Gressitt coll. (BISHOP).

Paratype is slightly larger, 5.00 mm, PE-VII slightly longer, paratergites twice as long as segment IX.

A. longicornis n. sp. is related to *A. longiceps* (Kormilev), 1967, from Fiji, but the paratergites are larger and much longer.

Arbanatus longulus Kormilev, new species Fig. 214–215.

♀. Macropterous. Elongate with almost parallel sides, granulate.

Related to *A. longicornis* n. sp., but smaller, head relatively shorter, antennal segment III less than 2 × as long as II; pronotum relatively shorter; connexivum VII more sinuate exteriorly and PE-VII more diverging; paratergites more acute and segment IX conical.

Anterior process of head reaching basal 1/3 of antennal segment I; labium not reaching hind border of labial groove, which is closed posteriorly lateral borders of pronotum less sinuate, lateral borders of abdomen more parallel; paratergites 2 × as long as segment IX. Spiracles II and VIII lateral, III to VI ventral, placed close to margin, VII sublateral and slightly visible from above.

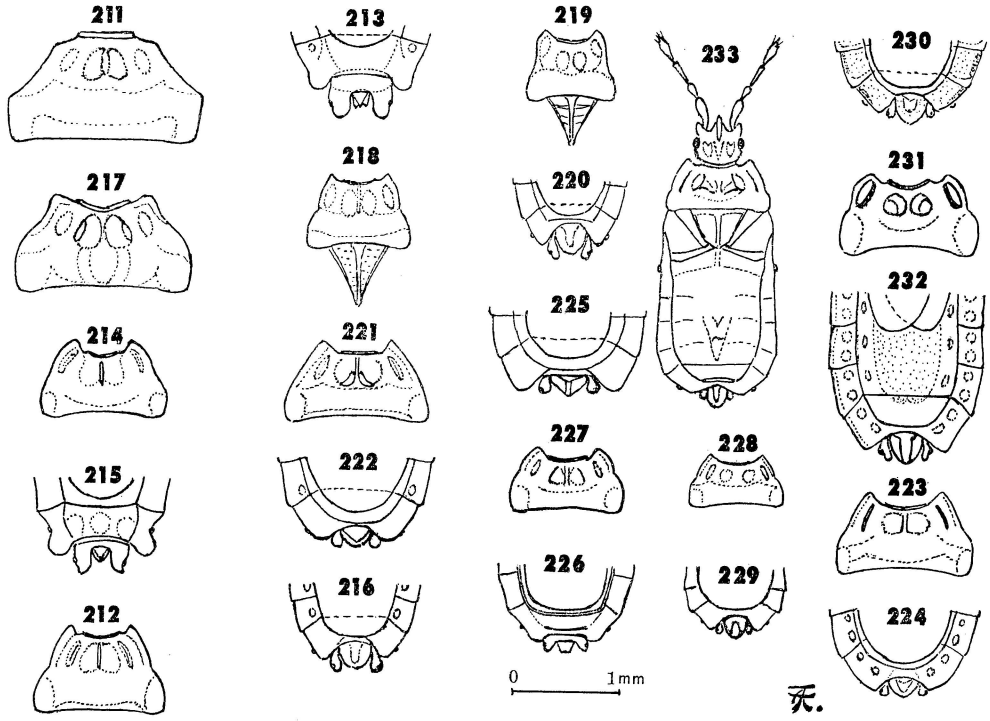


Fig. 211–233. 211, *Arbanatus philippinensis* n. sp., ♀, pronotum; 212, *A. longicornis* n. sp., ♀, pronotum; 213, same, tip of abdomen from above; 214, *A. longulus* n. sp., ♀, pronotum; 215, same, tip of abdomen from above; 216, *A. simplex* n. sp., ♂, tip of abdomen from above; 217, *A. gressitti* n. sp., ♀, pronotum; 218, *A. longiscutum* n. sp., ♀, pronotum and scutellum; 219, *A. abdominalis* n. sp., ♂, pronotum and scutellum; 220, same, tip of abdomen from above; 221, *A. subparallelus* n. sp., ♂, pronotum; 222, same, tip of abdomen from above; 223, *A. castaneus* n. sp., ♂, pronotum; 224, same, tip of abdomen from above; 225, *A. moturikiensis* Kormilev, 1967, ♂, tip of abdomen from above; 226, *A. longirostris* n. sp., ♀, tip of abdomen from above; 227, *A. scabrosus* n. sp., ♂, pronotum; 228, *A. minutus* n. sp., ♂, pronotum; 229, same, tip of abdomen from above; 230, *A. distinctus* n. sp., ♂, tip of abdomen from above; 231, *A. piliferus* n. sp., ♀, pronotum; 232, *A. tahitiensis* n. sp., ♂, posterior half of abdomen from above; 233, *A. brachypterus* n. sp., ♂, dorsal aspect.

Hemelytra almost reaching hind border of tergum VII; clavus reaching tip of scutellum; corium short interiorly, reaching 3/4 of scutellum; strip along clavus membranous, rest of corium chitinous; apical angle acute, apical border oblique, reaching exteriorly slightly beyond fore border of connexivum III.

Abdomen ovate, lateral borders evenly convex; PE-angles II to VI not protruding, PE-VII truncate. Paratergites short, subtriangular, rounded posteriorly, reaching basal 1/3 of a tricuspidate segment IX. Metathoracic scent-gland openings thin, slit-like. Spiracles II and VIII lateral, III to VII ventral and not visible from above.

Measurements: head 15.5:17.5, relative length of antennal segments I to IV: 10:6:12:9; pronotum 23:44, ratio width of fore lobe/width of hind lobe 29:44; scutellum 19:27; abdomen 65:48.

Color: dark brown; connexivum and sternites posteriorly reddish brown, membrane whitish at base.

Total length: 4.92 mm; width of pronotum 1.76 mm; width of abdomen 1.92 mm.

Holotype ♀ (Bishop 9098), Philippines, Misamis Or., Mt Empagatao, 1050–1200 m, 19–30. IV.1961, H. Torrevillas coll.

Measurements: head 13:14.5, relative length of antennal segments I to IV: 9:5.5:10:– (segment IV missing); pronotum 14:28, ratio width of fore lobe/width of hind lobe 25:28; scutellum 15:17; abdomen 59:33.

Color: testaceous; tarsi yellowish brown, membrane white at base.

Total length: 4.04 mm.

Holotype ♀ (BISHOP 9100), NE New Guinea, Torricelli Mts, Siaute, sea level, 9–17.XI.1958, W. W. Brandt coll.

Arbanatus longiscutum Kormilev, new species Fig. 218.

♀. Macropterous. Elongate, finely granulate.

Closely related to *A. longicornis* n. sp., but much smaller and relatively narrower, with subparallel sides. Head relatively longer, antennal segment III 2 × as long as II; anterior process narrow, reaching 2/5 of antennal segment I; labium longer, reaching fore border of prosternum, labial groove open posteriorly. Antenniferous tubercles acute, diverging; postocular borders rounded, vertex raised and granulate. Pronotum similar to *A. longicornis* n. sp., but scutellum longer; abdomen and hemelytra similar to *A. longicornis* n. sp., but paratergites relatively shorter, only slightly produced beyond trapezoidal segment IX. In the ♂, paratergites clavate, slightly longer than hypopygium; the latter with parallel sides, rounded and depressed posteriorly, with a small, triangular, median ridge, reaching 3/5 of disc. Position of spiracles as in *A. longicornis* n. sp.

Measurements: head ♀ 14:11.5, ♂ 13:11; relative length of antennal segments I to IV: ♀ 7:4:8:7, ♂ 7:4.5:9:7.5; pronotum ♀ 15:25, ♂ 14:23, ratio width of fore lobe/width of hind lobe ♀ 20:25, ♂ 19:23; scutellum ♀ 15:15, ♂ 14:14; abdomen ♀ 55:28, ♂ 49:26; hypopygium 5:4.

Color: testaceous; membrane white at base.

Total length: ♀ 4.00, ♂ 3.64 mm; width of pronotum ♀ 1.00, ♂ 0.92 mm; width of abdomen ♀ 1.12, ♂ 1.04 mm.

Holotype ♀ (BISHOP 9101), SE New Guinea, Papua, W District, Oriomo Govt. Sta., 26–28. X.1960, J. L. Gressitt coll.

Allotype ♂ (BISHOP), Bismarck Arch., New Britain, Gazelle Pen., Kerawat, 60 m, 11.IX. 1955, J. L. Gressitt coll.

Paratypes: 1 ♀, Bismarck Arch., New Britain, Ti, Nakanai Mts, 29.VII.1956, E. J. Ford, Jr. coll.; 1 ♂, Solomon Is., Buka I., Gagan, 40 m, 16.VI.1956, J. L. Gressitt coll.

Arbanatus abdominalis Kormilev, new species Fig. 219–220.

♂. Macropterous. Elongate, abdomen elongate ovate, very finely granulate.

Also related to *A. longicornis* n. sp., but much smaller, head relatively longer, anterior process reaching 1/2 of antennal segment I; labium reaching hind border of labial groove, which is closed posteriorly. Antenniferous tubercles more diverging, postocular borders evenly rounded. Anterolateral angles of pronotum produced forward far beyond collar, blunt apically; lateral borders very slightly sinuate, convex; disc similar to *A. longicornis* n. sp., but granulation finer. Scutellum with a straight median carina, disc transversely rugose. Hemelytra reaching 1/2 of tergum VII; apical angle of corium acute, apical border weakly sinuate interiorly. Abdomen with convex lateral borders; connexiva VII almost straight exteriorly, PE-angles III to V not protruding, PE-VI slightly protruding, blunt; PE-VII produced backward as rounded lobes, reaching 1/2 of paratergites. Paratergites clavate, longer than hypopygium; the latter rounded and depressed posteriorly, median ridge triangular, reaching 2/3 of disc. Spiracles II and VIII lateral, III to VI ventral, VII sublateral and slightly visible from above.

Measurements: head ♂ 13:11, ♀ 13:12; relative length of antennal segments I to IV: ♂ 7:5:10:7, ♀ 8:5.5:10.5:7; pronotum ♂ 13:21, ♀ 14:25, ratio width of fore lobe/width of hind lobe ♂ 18:21, ♀ 20:25; scutellum ♂ 12:13, ♀ 15:15; abdomen ♂ 47:26.5, ♀ 55:30; hypopygium 5:6.

Color: testaceous; base of membrane white.

Total length: ♂ 3.44, ♀ 3.92 mm; width of pronotum ♂ 0.84, ♀ 1.00 mm; width of abdomen ♂ 1.06, ♀ 1.20 mm.

Holotype ♂ (BISHOP 9102), Solomon Is., New Georgia Group, Kolombangara I., Kukundu, SW coast, 1–12 m, 10.VII.1959, J. L. Gressitt coll.

Allotopotype ♀ (BISHOP), collected with holotype.

Paratypes: 2 ♀♀, Solomon Is., Malaita, Tangtalau, 200 m, 26.IX.1957, J. L. Gressitt coll.; 2 ♀♀, Buka I., Gagan, 40 m, 16.VI.1956, J. L. Gressitt coll.; 1 ♂, SE New Guinea, Papua, Brown Riv., E of Port Moresby, 100 m, 8.VI.1955, J. L. Gressitt coll.; 1 ♂, Bismarck Arch., New Britain, Kerawat, 5 m, Jungle, 9.X.1957, J. L. Gressitt coll.

Arbanatus simplex Kormilev, new species Fig. 216.

♂. Macropterous. Elongate, very finely granulate.

Anterior process of head almost reaching 1/2 of antennal segment I; antenniferous tubercles short, blunt, diverging; postocular borders rounded, vertex with V-form rows of granules. Antennae less than 2 × as long as width of head across eyes; labium almost reaching hind border of labial groove, which is open posteriorly.

Anterolateral angles of pronotum rectangular, produced forward beyond collar; lateral borders convex anteriorly and posteriorly, sinuate in middle. Fore disc with a thin and short median sulcus, laterad of it flat, with semiobliterated ridges. Lateral borders of scutellum carinate and sinuate before apex; median carina straight, disc granulate.

Abdomen with convex lateral borders; connexiva II and III fused; PE-angles III to VI barely protruding, PE-VII produced backward, reaching 1/2 of paratergites; connexivum VII barely sinuate exteriorly. Paratergites large, clavate, longer than hypopygium; the latter flat, declivous, rounded posteriorly; median carina almost reaching tip of disc. Spiracles II and VIII lateral, III to VI ventral, VII sublateral and slightly visible from above.

Measurements: head 13:13; relative length of antennal segments I to IV: 6:4.5:8:6; pronotum 13:26, ratio width of fore lobe/width of hind lobe 21:26; scutellum 13:14; abdomen 47.5:30; hypopygium 6:7.

Color: testaceous, partially darker; membrane whitish.

Total length: 3.50 mm; width of pronotum 1.04 mm; width of abdomen 1.20 mm.

Holotype ♂ (BISHOP 9103), NE New Guinea, Wum, Upper Jimmi Vall., 840 m, 17.VII.1955, J. L. Gressitt coll.

Paratopotype: 1 ♂, collected with holotype (BISHOP).

Arbanatus simulans Kormilev, new species

♂. Macropterous. Elongate, with subparallel sides; finely granulate.

Closely related to *A. simplex* n. sp., but slightly shorter and with more parallel sides. Anterior process of head reaching 2/5 of antennal segment I; antenniferous tubercles acute, their exterior borders subparallel; postocular borders rounded; vertex with V-form rows of granules. Antennae longer, antennal segments I, III and IV equal in length; labium reaching hind border of labial groove, which is closed posteriorly.

Anterolateral angles of pronotum acute, produced forward far beyond collar; lateral borders slightly sinuate in middle. Fore disc with a deep and narrow median sulcus, flanked by 2(1 + 1) raised, round callosities, and further laterad with 2(1 + 1) narrow ridges. Scutellum as long as its basal width; lateral borders carinate and sinuate in middle; median carina cross-shaped, smooth; disc obliquely rugose.

Abdomen slightly widening posteriorly; lateral borders straight, diverging from segment II to V, slightly sinuate on VI and VII; PE-angles not protruding on II to V, slightly protruding on VI, rectangular with blunt tips on VII. Paratergites slim, clavate, reaching tip of hypopygium, which is rounded posteriorly. Spiracles II and VIII lateral, III to VII ventral and not visible from above.

Measurements: head 12.5:12.5, relative length of antennal segments I to IV: 7.5:5:7.5:7.5; pronotum 12.5:25, ratio width of fore lobe/width of hind lobe 22:25; scutellum 14:14; abdomen 45:28; hypopygium 7:6.5.

Color: yellowish brown, partially darker; membrane black, lighter at base.

Total length: 3.40 mm; width of pronotum 0.88 mm; width of abdomen 1.12 mm.

Holotype ♂ (BISHOP 9104), NW New Guinea, Biak I., Kampong Landbouw, 50–100 m, J. L. Gressitt coll., on Palm.

Arbanatus gressitti Kormilev, new species Fig. 217.

♀. Macropterous. Elongate, with parallel sides; roughly granulate.

Anterior process of head with parallel sides, tapering and incised anteriorly, reaching beyond 1/2 of antennal segment I; antenniferous tubercles dentiform, acute, strongly divaricating; postocular borders with a minute tooth just behind eyes, then rounded; vertex granulate. Antennae strong, but short, less than 2 × as long as width of head across eyes; antennal segment IV longest. Labium not reaching hind border of labial groove, which is closed posteriorly.

Pronotum with anterolateral angles expanded, produced forward beyond collar and rounded; lateral borders parallel at humeri, strongly converging and sinuate anteriorly. Fore disc with a thin median sulcus, flanked by 4(2 + 2) ridges of which the outer ones are smaller; hind disc roughly granulate.

Lateral borders of scutellum carinate, convex at base, sinuate near apex; tip incised; median carina strong, cross-shaped; disc granulate.

Hemelytra reaching hind border of tergum VI; corium with apical angle acute, apical border slightly sinuate interiorly.

Abdomen with subparallel borders, slightly convex; connexiva II and III separated from each other; PE-angles not protruding, PE-VII rounded. Tergum VII raised, depressed in middle. Paratergites large, rounded posteriorly, reaching basal 2/5 of a long and large, tricuspidate segment IX. Spiracles II and VIII lateral, III to VII ventral and not visible from above.

Measurements: head 16:18, relative length of antennal segments I to IV: 8:5:8:10; pronotum 18:40, ratio width of fore lobe/width of hind lobe 28:40; scutellum 18:20; abdomen 73:45.

Color: piceous; tibiae and tarsi lighter; membrane whitish at base.

Total length: 5.12 mm; width of pronotum 1.60 mm; width of abdomen 1.80 mm.

Holotype ♀ (BISHOP 9105), NW New Guinea, Swart Vall., Karubaka, 1450 m, 5.XI.1958, J. L. Gressitt coll.

It is a pleasure to dedicate this species to its collector, Dr J. Linsley Gressitt, Chair of Zoology, B. P. Bishop Museum, who collected so many new species of Aradidae.

A. gressitti n. sp. is of one of the largest in genus, and has no close relatives on New Guinea; it is distantly related to *A. inermis* Kormilev, 1955, but the shape of pronotum is quite different.

Arbanatus subparallelus Kormilev, new species Fig. 221–222.

♂. Macropterous. Elongate ovate with subparallel borders and abbreviated hypopygium; granulate.

Anterior process of head short and thin, constricted laterally, reaching basal 1/3 of antennal segment I; antenniferous tubercles short, subacute, slightly divaricating; postocular borders rounded, vertex raised and granulate. Antennae strong and long; labium reaching hind border of labial groove, which is closed posteriorly.

Anterolateral angles of pronotum angularly produced forward far beyond collar; lateral borders straight, converging; fore disc with a median sulcus, flanked by 2(1 + 1) round, slightly raised elevations, and laterad of them with 2(1 + 1) narrow ridges; hind disc granulate. Lateral borders of scutellum carinate, sinuate before apex; median carina thin, disc transversely rugose. Hemelytra reaching 2/3 of tergum VII; apical border of corium twice sinuate, apical angle acute.

Abdomen with subparallel sides; connexiva II and III fused; PE-angles not protruding, PE-VII subtruncate, or slightly rounded. Paratergites minute, subglobose, almost reaching tip of a minute, triangular, apically pointed hypopygium. Spiracles II lateral, III to VI ventral, placed close to margin, VII sublateral and slightly visible from above, VIII laterotermina. Paratergites (♀) subtriangular, segment IX truncate.

Measurements: head ♂ 15:15.5, ♀ 14.5:16; relative length of antennal segments I to IV: ♂ 9:5.5:10:8.5, ♀ 8:5:9:8; pronotum ♂ 16:32.5, ♀ 16:31; ratio width of fore lobe/width of hind lobe ♂ 26:32.5, ♀ 26:31; scutellum ♂ 16:18, ♀ 16:18; abdomen ♂ 62:38, ♀ 56:37.5; hypopygium 3:6.

Color: dark brown to piceous; membrane black, lighter at base and in the middle.

Total length: ♂ 4.40, ♀ 4.28 mm; width of pronotum ♂ 1.30, ♀ 1.24 mm; width of abdomen ♂ 1.52, ♀ 1.50 mm.

Paratypes from New Britain and New Hebrides are smaller, ♂ 3.68 mm.

Holotype ♂ (BISHOP 9106), Solomon Is., Bougainville, S, Kokure, 690 m, 9.VI.1956, E. J. Ford, Jr. coll.

Allotopotype ♀ (BISHOP), collected with holotype.

Paratypes: 1 ♂, collected with holotype; 1 ♂, Bismarck Arch., New Britain, Gazelle Pen., Kerawat, 60 m, 31.VIII.1955, J. L. Gressitt coll.; 1 ♂, New Hebrides, Efate I., NW, Limestone Plateau, N of Maat, 100 m, 17.VIII.1957, J. L. Gressitt coll. (all BISHOP).

A. subparallelus n. sp. is closely related to *A. moturikiensis* (Kormilev), 1967, from Fiji, but is longer, the connexivum is relatively narrower, the anterolateral angles of pronotum are more produced forward, the ridges of fore lobe are lower, and the hypopygium much shorter.

Arbanatus castaneus Kormilev, new species Fig. 223–224.

♂. Macropterous. Elongate, with parallel sides; granulate.

Related to *A. subparallelus* n. sp., but anterior process of head conical, lateral borders of pronotum slightly sinuate, corium relatively longer, reaching basal 1/3 of connexivum III (posterior border of connexivum II in *A. subparallelus*), abdomen more rounded posteriorly and paratergites (♂) flat, not subglobose.

Anterior process of head subtruncate anteriorly, reaching basal 1/3 of antennal segment I; postocular borders rounded and granulate; vertex flat, granulate. Antennae 2 × as long as width of head across eyes; labium reaching hind border of labial groove, which is closed posteriorly.

Anterolateral angles of pronotum angularly produced forward far beyond collar; lateral borders slightly sinuate in middle, subparallel at humeri, strongly converging anteriorly; fore disc with a thin median sulcus, flanked by 2(1 + 1) low, round elevations, and further laterad by 2(1 + 1) low and narrow ridges; hind disc granulate. Lateral borders of scutellum carinate and sinuate before apex, tip incised; median carina thin, disc transversely rugose. Hemelytra reaching 3/4 (♂), or 1/2 (♀) of tergum VII; apical angle of corium acute, apical border twice sinuate.

Abdomen with parallel sides; connexiva II and III fused; PE-angles not protruding, PE-VII rounded. Paratergites (♂) flat, rounded posteriorly, reaching tip of a small subtriangular hypopygium, the latter with a small, triangular, median ridge, not reaching tip of disc. Paratergites (♀) large, rounded posteriorly, almost reaching tip of a tricuspidate segment IX. Spiracles II and VIII lateral, III to VII ventral, placed close to margin, but not visible from above.

Measurements: head ♂ 13:15, ♀ 14.5:16; relative length of antennal segments I to IV: ♂ 8:5:9.5:8, ♀ 8:5.5:10:9.5; pronotum ♂ 15:31, ♀ 17:35, ratio width of fore lobe/width of hind lobe ♂ 25:31, ♀ 28:35; scutellum ♂ 16:17.5, ♀ 18:20; abdomen ♂ 55:36, ♀ 65:41; hypopygium 4.5:7.

Color: dark chestnut brown; antennae, connexivum and legs lighter, chestnut brown; membrane whitish at base.

Total length: ♂ 4.16, ♀ 4.68 mm; width of pronotum ♂ 1.24, ♀ 1.40 mm; width of abdomen ♂ 1.44, ♀ 1.64 mm.

Holotype ♂ (BISHOP 9107), Solomon Is., Bougainville, S, Kokure, 690 m, 9.VI.1956, E. J. Ford, Jr. coll.

Allotopotype ♀ (BISHOP), collected with holotype.

Arbanatus brunneus (Kormilev), 1968, new combination

Pictinellus brunneus Kormilev, 1968, *Quart. J. Taiwan Mus.* **21**(3–4): 228.

DISTRIBUTION: New Caledonia.

In the collections of the Bishop Museum there are 2 specimens from Mt Koghi, New Caledonia.

Arbanatus tricolor Kormilev, new species

♂. Macropterous. Elongate ovate; head and pronotum sparsely, but roughly granulate.

Closely related to *A. brunneus* (Kormilev), 1968, but anterolateral angles of pronotum slightly expanded and rounded (angularly produced forward in *A. brunneus*), only reaching fore border of collar, and connexivum tricolorous: disc brown, anterolateral angles and hind borders of connexiva III to VI yellow, and exterior borders piceous to black in middle. Other characters similar in both species.

Anterior process of head reaching 2/5 of antennal segment I, postocular borders rounded and granulate, vertex with V-form rows of granules; infraocular carinae distinct. Labium reaching hind border of labial groove, which is closed posteriorly. Lateral borders of pronotum constricted in middle; fore disc with 4(2 + 2) high ridges, hind disc sparsely granulate anteriorly. Apical angle of corium acute, apical border convex exteriorly, sinuate interiorly. Connexiva II and III fused together; PE-angles slightly, progressively protruding; PE-VII truncate posteriorly. Paratergites clavate, reaching 2/3 of hypopygium, the latter in the shape of an acorn, with a triangular median ridge, not reaching tip of disc.

Measurements: head 14:15, relative length of antennal segments I to IV: 8:5:8.5:7.5; pronotum 15:31, ratio width of fore lobe/width of hind lobe 25:31; scutellum 15:16; abdomen 52.5:38; hypopygium 9:9.

Color: brown; connexivum tricolorous: brown, yellow and piceous; membrane brown, whitish at base.

Total length: 4.00 mm; width of pronotum 1.24 mm; width of abdomen 1.52 mm.

Holotype ♂ (BISHOP 9108), New Caledonia, 10 km S of Koh, 300 m, 31.I.1963, G. Kuschel coll.

Arbanatus elegantulus Kormilev, new species

♀. Macropterous. Elongate, with parallel sides; finely granulate.

Closely related to *A. leai* (Kormilev), 1967, from Fiji, but slightly smaller and with parallel sides; connexivum narrower, PE-angles not protruding, paratergites rounded; spiracles II lateral, III to VI ventral, placed close to border, VII sublateral and slightly visible from above, VIII lateral. First valvifer is scabrous, with sparse, very fine granules (distinctly, longitudinally striate in *A. leai*).

Anterior process of head with parallel sides, tricuspidate anteriorly, reaching 1/2 of antennal segment I; antenniferous tubercles strongly diverging; postocular borders rounded, vertex with V-form carina and 2(1 + 1) small tubercles behind it on posterior border. Antennae almost 2 × as long as width of head across eyes; labium reaching base of head, labial groove open posteriorly.

Anterolateral angles of pronotum produced forward beyond collar and rounded; lateral borders sinuate in middle, convex anteriorly and posteriorly. Fore disc with a short and deep median sulcus, flanked by 4(2 + 2) ridges; hind disc granulate. Lateral borders of scutellum carinate and sinuate before apex; median carina cross-shaped, disc granulate. Apical angle of corium acute, apical border deeply sinuate interiorly and slightly exteriorly. Abdomen with parallel sides from II to V, then converging; connexiva II and III fused (semifused in *A. leai*). Paratergites reaching 2/3 of a tricuspidate segment IX.

Measurements: head 13:13, relative length of antennal segments I to IV: 7:4.5:7:7; pronotum 15:26, ratio width of fore lobe/width of hind lobe 20:26; scutellum 13:13; abdomen 47.5:29.

Color: yellowish brown; head, pronotum, scutellum and corium partially infuscate; membrane black, with white base and middle.

Total length: 3.56 mm; width of pronotum 1.04 mm; width of abdomen 1.16 mm.

Holotype ♀ (BISHOP 9109), New Caledonia, Mt Koghi, 600 m, 30.XI.1963, R. Straatman coll.

Arbanatus elongatus (Kormilev), 1967, new combination

Pictinellus elongatus Kormilev, 1967, *Rec. S. Austral. Mus.* **15**(3): 539.

DISTRIBUTION: Fiji.

In the collections of the Bishop Museum there is a specimen from Ovalau I., Fiji.

Arbanatus longiceps (Kormilev), 1967, new combination

Pictinellus longiceps Kormilev, 1967, *Rec. S. Austral. Mus.* **15**(3): 539.

DISTRIBUTION: Fiji.

In the collections of the Bishop Museum there are 6 specimens from Viti Levu and Vanua Levu, Fiji.

Arbanatus leai (Kormilev), 1967, new combination
Pictinellus leai Kormilev, 1967, *Rec. S. Austral. Mus.* **15**(3): 536.

DISTRIBUTION: Fiji.

In the collections of the Bishop Museum there are 10 specimens from Viti Levu, Vanua Levu and Ovalau, Fiji.

Arbanatus moturikiensis (Kormilev), 1967, new combination Fig. 225.
Pictinellus moturikiensis Kormilev, 1967, *Rec. S. Austral. Mus.* **15**(3): 538.

DISTRIBUTION: Fiji.

It is the commonest species on Fiji. In the collections of the Bishop Museum there is a large series from Viti Levu, Fiji.

Males of *A. moturikiensis* (Kormilev), 1967, have PE-VII angular, rounded apically; the paratergites are small, clavate, and reach 2/3 of a triangular, pointed posteriorly, hypopygium.

Arbanatus longirostris Kormilev, new species Fig. 226.

♀. Macropterous. Elongate with parallel sides; head and pronotum finely granulate.

Closely related to *A. elegantulus* n. sp. from New Caledonia, but slightly larger, antennae relatively longer, more than 2 × as long as width of head across eyes; labium longer, produced beyond fore border of prosternum; exterior borders of connexiva VI and VII sinuate, (straight in *A. elegantulus*); segment IX relatively shorter and rounded posteriorly (tricuspidate in *A. elegantulus*). Other characters as in *A. elegantulus*.

Measurements: head ♀ 11.5:12, ♂ 10.5:11.5; relative length of antennal segments I to IV: ♀ 8:5:9:7.5, ♂ 7:5:8:7; pronotum ♀ 14:28, ♂ 13:27.5; ratio width of fore lobe/width of hind lobe ♀ 22:28, ♂ 22:27.5; scutellum ♀ 15:15, ♂ 15:15; abdomen ♀ 52.5:33, ♂ 45:31; hypopygium 4:5.5.

Color: yellowish brown to testaceous; connexivum, labium and legs yellow, or pale yellowish brown; membrane white at base.

Total length: ♀ 3.80, ♂ 3.56 mm; width of pronotum ♀ 1.12, ♂ 1.10 mm; width of abdomen ♀ 1.32, ♂ 1.24 mm.

Holotype ♀ (BISHOP 9110), Fiji, Viti Levu, Nandarivatu, 5.IX.1938, E. C. Zimmerman coll., (shrubs).

Allotopotype ♂ (BISHOP), same locality and collector, 10.IX.1938.

Arbanatus parallelus (Van Duzee), 1932, new combination
Ctenoneurus parallelus Van Duzee, 1932, *Bull. Bishop Mus.* **98:** 178.
Pictinellus parallelus: Usinger & Matsuda, 1959, Class. Aradidae, p. 290.
Pictinellus telmae Kormilev, 1966, *Proc. Ent. Soc. Wash.* **68**(4): 306. **New Synonymy.**

A. parallelus (Van Duzee), 1932, is the commonest species in Polynesia and is distributed from Samoa to Rapa I. It is inclined to certain variability, particularly in the length of antennal segment III, but I was not able to separate it into geographical subspecies as all varieties were found in the same lot from the same locality, with exception of *A. p. gracilis* n. ssp. from Fiji, which is described in this paper. *Pictinellus telmae* Kormilev, 1966, from Rapa I. is only a variety of *A. parallelus* (Van Duzee), 1932.

In the collections of the Bishop Museum there are large series of *A. parallelus* (Van Duzee) from Samoa (Upolu), Austral Is. (Tubuai I.), and Rapa I. Van Duzee recorded it from Tahiti and Marquesas Is.

Arbanatus parallelus gracilis Kormilev, new subspecies

♂. Macropterous. Elongate with subparallel sides.

Closely related to *A. parallelus* (Van Duzee), 1932, from Marquesas Is., but antennae shorter, less than twice as long as width of head across eyes, particularly antennal segment III shorter, as long as IV (longer than IV in *A. parallelus*). Other characters similar.

Measurements: head ♂ 11:11, ♀ 11.5:12; relative length of antennal segments I to IV: ♂ 5.5:4:6:6, ♀ 6.5:4:6.5:6.5; pronotum ♂ 11:22, ♀ 12:24; scutellum ♂ 11:11, ♀ 11:12; abdomen ♂ 38:25, ♀ 40:25; hypopygium 3.5:5.

Color: testaceous; membrane white at base.

Total length: ♂ 2.92, ♀ 3.08 mm; width of pronotum ♂ 0.88, ♀ 0.96 mm; width of abdomen ♂ 1.00, ♀ 1.00 mm.

Holotype ♂ (BISHOP 9111), Fiji, Ovalau, Wainiloka, 11.VII.1938, beating, E. C. Zimmerman coll.

Allotype ♀ (BISHOP), Fiji, Lami, Quarry nr. Suva, 24.VII.1938, beating, E. C. Zimmerman coll.

Paratypes: 1 ♀, Fiji, Viti Levu, Mt Korombamba, 1.VIII.1938, beating, 330 m (1100′), E. C. Zimmerman coll.

Arbanatus pacificus (China), 1930, new combination

Pictinus pacificus China, 1930, *Ins. Samoa* **2**(3): 106.

Pictinellus pacificus: Usinger & Matsuda, 1959, Class. Aradidae, p. 289.

DISTRIBUTION: Samoa, Carolines Is.

Closely related to *A. parallelus* (Van Duzee), 1932, but has relatively longer antennae. *A. pacificus* is also inclined to a certain variability in the length of antennal segment III.

In the collections of the Bishop Museum there are specimens from Samoa (Upolu).

Arbanatus scabrosus Kormilev, new species Fig. 227.

♂. Macropterous. Elongate ovate, with parallel sides; body covered with extremely short, yellow pubescence, which gives it a look of scabrosity.

Anterior process of head short, tapering anteriorly, reaching 2/5 of antennal segment I; antenniferous tubercles short, blunt, diverging; postocular borders rounded; vertex with V-shaped carina. Antennae less than 2 × as long as width of head across eyes; labium long, reaching fore border of prosternum, labial groove open posteriorly. Anterolateral angles of pronotum produced forward beyond collar; lateral borders sinuate in middle, convex anteriorly and posteriorly. Fore disc with a median depression, flanked by 4(2 + 2) low ridges; hind disc granulate.

Lateral borders of scutellum carinate, sinuate before apex; tip cut out; median carina high, disc transversely rugose. Corium with apical angle acute and apical border twice sinuate.

Abdomen with subparallel borders; connexiva II and III fused; PE-angles II to IV not protruding, V and VI slightly protruding, (more in the ♂); VII slightly produced backward and rounded. In the ♂, exterior borders of connexiva VI and VII sinuate. Paratergites (♂) small, subcylindrical, reaching 2/3 of hypopygium; the latter declivous, rounded posteriorly, median ridge reaching tip of disc. Paratergites (♀) subtriangular, rounded posteriorly, reaching 2/3 of a posteriorly rounded segment IX. Spiracles II and VIII lateral, III to VI ventral, placed close to margin, VII sublateral and slightly visible from above.

Measurements: head ♂ 12.5:12.5, ♀ 13:13; relative length of antennal segments I to IV: ♂ 7:4:7:6, ♀ 7.5:4:7:6; pronotum ♂ 13:28, ♀ 14:30; ratio width of fore lobe/width of hind lobe ♂ 23:28, ♀ 24:30; scutellum ♂ 12:13, ♀ 12:14; abdomen ♂ 37:29, ♀ 43:31; hypopygium 5:7.5.

Color: testaceous; membrane brown, tarsi yellow.

Total length: ♂ 3.00, ♀ 3.26 mm; width of pronotum ♂ 1.12, ♀ 1.20 mm; width of abdomen ♂ 1.16, ♀ 1.24 mm.

Holotype ♂ (BISHOP 9112), Samoa, Tutuila I., Pango Pango, North side, 1000′, 8.VIII.1940, E. C. Zimmerman coll.

Allotopotype ♀ and 1 ♂ paratopotype, collected with holotype; 1 ♂ & 1 ♀, Tutuila, 8.VIII. 1958, R. Kellen coll. (all BISHOP).

Arbanatus minutus Kormilev, new species Fig. 228–229.

♂. Macropterous. Elongate ovate, slightly widening backward; sparsely and finely granulate on hind

disc of pronotum.

Related to *A. parallelus* (Van Duzee), 1932, but smaller, anterolateral angles of pronotum acute, produced anteriorly beyond collar, hypopygium more pointed posteriorly. Anterior process of head almost reaching 1/2 of antennal segment I; antenniferous tubercles short, diverging; postocular borders rounded; labium produced beyond fore border of prosternum; PE-angles II to IV not protruding, V to VI slightly protruding, VII directed posteriorly and rounded. Spiracles II lateral, III to VI ventral, VII sublateral, but not visible from above, VIII dorsolateral.

Measurements: head 10.5:10.5, relative length of antennal segments I to IV: 5.5:3.5:6:6; pronotum 9:22.5, ratio width of fore lobe/width of hind lobe 18:22.5; scutellum 9.5:12; abdomen 36:24 across segment V; hypopygium 3.5:5.5.

Color: pale testaceous; connexivum creamy yellow.

Total length: 2.64 mm; width of pronotum 0.90 mm; width of abdomen 0.96 mm.

Holotype ♂ (BISHOP 9113), Austral Is., Tubuai I., SW Ridge, Mt Taita, 360 m (1200′), 23. VIII.1934, E. C. Zimmerman coll., in dead *Cyathia* fronds.

Arbanatus distinctus Kormilev, new species Fig. 230.

♀. Macropterous. Elongate ovate; head, pronotum and scutellum granulate.

Anterior process of head conical, reaching 1/2 of antennal segment I; antenniferous tubercles small, acute, diverging; postocular borders rounded, granulate; vertex with V-form carina. Antennae long, more than 2 × as long as width of head across eyes. Labium reaching fore border of prosternum, labial groove open posteriorly.

Anterolateral angles of pronotum angularly produced forward beyond collar, blunt apically; lateral borders parallel at humeri, sinuate in middle, convex anteriorly. Fore disc with 4(2 + 2) low elevations; hind disc granulate.

Scutellum with carinate lateral borders, sinuate before apex; median carina strong, disc transversely rugose.

Hemelytra reaching 3/4 of tergum VII (♂), or slightly over fore border of tergum VII (♀); apical angle of corium rounded, slightly produced beyond hind border of connexivum II, apical border sinuate interiorly, rounded exteriorly.

Abdomen ovate; connexiva II and III fused; PE-angles II to V not protruding, VI slightly protruding, rounded; VII rounded. Paratergites (♂) clavate, reaching 2/3 of hypopygium; the latter dorsocaudal in position, declivous, rounded posteriorly; median ridge short, rounded posteriorly, reaching 1/2 of disc. Paratergites (♀) subtriangular, reaching 1/2 of segment IX, which is truncate posteriorly. Spiracles II and VIII lateral, III to VI ventral, placed close to margin, VII sublateral and visible from above.

Measurements: head ♂ 12.5:12.5, ♀ 14:14; relative length of antennal segments I to IV: ♂ 7:4.5:9:7, ♀ 8:5:10:8; pronotum ♂ 13:30, ♀ 16:31; ratio width of fore lobe/width of hind lobe ♂ 24:30, ♀ 25:31; scutellum ♂ 13:15, ♀ 14:17; abdomen ♂ 47:36, ♀ 53:39; hypopygium 6:7.5.

Color: ferrugineous; hind borders of connexiva, labium, trochanters, tibiae and tarsi, orange yellow.

Total length: ♂ 3.56, ♀ 3.92 mm; width of pronotum ♂ 1.20, ♀ 1.24 mm; width of abdomen ♂ 1.44, ♀ 1.56 mm.

Holotype ♂ (BISHOP 9114), Samoa, Upolu, Afiamalu, 660 m (2200′), 10.VII.1940, E. C. Zimmerman coll., beating dead branches.

Allotopotype ♀ (BISHOP), same locality and collector, 22.VI.1940.

Paratypes: 12 ♂♂ & 20 ♀♀, same locality and collector, and Upolu, Tiavi, E. C. Zimmerman coll., 15.VI–22.VII.1940.

A. distinctus n. sp. is intermediate between the "parallelus group" and the "samoanus group." It is related to *A. pilosulus* n. sp. from the latter group, but is narrower, the ridges of pronotum are less prominent, the hypopygium has a shorter median ridge, and the pilosity is absent.

Arbanatus polynesicus Kormilev, new species

♀. Macropterous. Elongate, subparallel; head, pronotum and scutellum partially granulate.

Closely related to *A. distinctus* n. sp., but narrower, with sides more parallel; paratergites and segment IX relatively shorter, the latter incised posteriorly. Anterior process of head reaching basal 1/3 of antennal segment I; labium reaching fore border of prosternum, labial groove open posteriorly. Median sulcus of the fore lobe of pronotum deep and narrow, lateral ridges narrower and more prominent. Corium reaching beyond fore border of connexivum III, its apical angle acute, apical border sinuate interiorly, straight exteriorly. PE-angles not protruding. Paratergites reaching 3/4 of segment IX. Spiracles II and VIII lateral, III to VI ventral, placed close to border, VII sublateral, but not visible from above.

Measurements: head 12:12.5, relative length of antennal segments I to IV: 7:4.5:9.5:7.5; pronotum 13:29, ratio width of fore lobe/width of hind lobe 23:29; scutellum 13:15; abdomen 50:32.5 across segment V.

Color: testaceous; lateral borders of connexiva infuscate, posterior yellow; membrane brown, whitish at base.

Total length: 3.76 mm; width of pronotum 1.16 mm; width of abdomen 1.30 mm.

Holotype ♀ (BISHOP 9115), Samoa, Upolu, Afiamalu, 660 m (2200′), 27.VI.1940, E. C. Zimmerman coll., beating dead branches.

Arbanatus piliferus Kormilev, new species Fig. 231.

♀. Macropterous. Elongate with parallel sides.

Also related to *A. distinctus* n. sp., but sturdier and with parallel sides; head, pronotum, scutellum, veins of corium, and carinae separating tergum from connexivum, covered with fine, short, white pubescense; postocular portion of head relatively shorter, postocular borders more transverse, granulate. Ridges of pronotum more prominent, median sulcus deeper; lateral borders more reflexed, and hind lobe depressed in middle anteriorly. Abdomen relatively shorter.

Anterior process of head reaching 2/5 of antennal segment I; antenniferous tubercles acute, diverging, vertex with V-form carina. Labium not reaching hind border of labial groove, which is open posteriorly. Anterolateral angles of pronotum slightly produced beyond collar, rounded and reflexed; lateral borders convex anteriorly and posteriorly constricted in middle; hind disc granulate. Lateral borders of scutellum thin, high, barely sinuate; median carina high and narrow, disc transversely rugose. Apical angle of corium blunt, apical border barely sinuate interiorly, slightly convex exteriorly. PE-angles of connexiva II to V not protruding, VI slightly protruding, PE-VII forming small, rounded lobes; exterior borders of connexiva VI and VII slightly sinuate. Paratergites rounded posteriorly, almost reaching tip of a tricuspidate segment IX. Spiracles II and VIII lateral, III to VI ventral, VII ventral, placed close to border, but not visible from above.

Measurements: head 14:15.5; relative length of antennal segments I to IV: 8:5:7.5:7.5; pronotum 15:32, ratio width of fore lobe/width of hind lobe 27:32; scutellum 13:16, abdomen 46:35.

Color: light testaceous; exterior borders of connexiva infuscate anteriorly; posterior borders of connexiva, tibiae and tarsi, yellow.

Total length: 3.60 mm; width of pronotum 1.28 mm; width of abdomen 1.40 mm.

Holotype ♀ (BISHOP 9116), Samoa, Upolu, Malololelei Road, 600 m (2000′), 18.VI.1940, E. C. Zimmerman coll.

Paratype: 1 ♀, without antennae, collected with holotype (BISHOP).

Arbanatus samoanus (China), 1930, new combination

Ctenoneurus samoanus China, 1930, *Ins. Samoa* **2**(3): 108.

Pictinellus samoanus: Usinger & Matsuda, 1959, Class. Aradidae, p. 269.

DISTRIBUTION: Samoa.

In the collections of the Bishop Museum there are 5 specimens from Samoa (Upolu, Tutuila).

This species has a very characteristic hypopygium: caudal in position, deeply encased in the abdomen, and flat posteriorly.

Arbanatus robustus Kormilev, new species

♀. Macropterous. Elongate ovate; head, pronotum and scutellum partially granulate.

Related to *A. samoanus* (China), 1930, but is larger and more robust; anterior process of head relatively shorter, reaching basal 1/3 of antennal segment I; antennal segment III is much longer, 2.5 as long as II; anterolateral angles of pronotum produced forward beyond collar and rounded (acute in *A. samoanus*); median sulcus and depressions between ridges shallower and ridges less sharp; median ridge of scutellum more robust and higher; posterior border of corium less convex exteriorly; connexiva II and III fused (separated in *A. samoanus*); PE angles III to VI slightly protruding, rounded (not protruding in *A. samoanus*); connexiva with posterior borders paler (in *A. samoanus* anteroexterior angles are dark brown). Other characters similar in both species.

Labium reaching fore border of prosternum; spiracles II and VIII lateral, III to VI ventral, very prominent, placed close to border, VII sublateral and slightly visible from above.

Measurements: head 15:17, relative length of antennal segments I to IV: 10:5:13:9; pronotum 18:40, ratio width of fore lobe/width of hind lobe 31:40; scutellum 17:24; abdomen 60:47.5.

Color: testaceous; connexivum pale testaceous; hind borders of connexiva, antennae and legs, yellow.

Total length: 4.48 mm; width of pronotum 1.60 mm; width of abdomen 1.90 mm.

Holotype ♀ (Bishop 9117), Samoa, Upolu, Afiamalu, 660 m (2200′), 11.VI.1940, E. C. Zimmerman coll.

Arbanatus pilosulus Kormilev, new species

♂. Macropterous. Elongate ovate, covered with moderately long, curled bristles.

Also related to *A. samoanus* (China), 1930, but is larger and more robust, exterior ridges of pronotum distinctly higher than interior (of the same height in *A. samoanus*); median ridge of scutellum robust, high, convex in middle; connexiva II and III fused, exterior borders of connexiva III to VII slightly sinuate, so that lateral borders look festooned. Paratergites larger, clavate, reaching 2/3 of dorsocaudal hypopygium, which is rounded posteriorly; median ridge of hypopygium robust, subtriangular, rounded posteriorly, almost reaching hind border of disc. Labium reaching hind border of labial groove, which is open posteriorly. Spiracles II lateral, III to VI ventral, placed close to margin, VII sublateral and visible from above, VIII dorsolateral.

Measurements: head 15:16, relative length of antennal segments I to IV: 7.5:5.5:9.5:9; pronotum 19:40, ratio width of fore lobe/width of hind lobe 31:40; scutellum 15:20; abdomen 50:42.5; hypopygium 7:8.

Color: ferrugineous; exterior borders of connexiva infuscate, PE-angles yellowish; membrane infuscate, whitish at base.

Total length: 4.12 mm; width of pronotum 1.60 mm; width of abdomen 1.70 mm.

Holotype ♂ (Bishop 9118), Samoa, Upolu, Afiamalu, 660 m (2200′), 9.VI.1940, E. C. Zimmerman coll., under dead bark.

Arbanatus tahitiensis Kormilev, new species Fig. 232.

♂. Brachypterous. Elongate ovate; pronotum sparsely and finely granulate.

Anterior process of head constricted at base, rounded anteriorly, reaching 1/2 of antennal segment I; antenniferous tubercles short, blunt, divaricating; postocular tiny, not reaching outer borders of eyes (left tubercle (♂) monstrous: curved and overlapping eye); vertex slightly raised. Labium reaching fore border of prosternum, labial groove open posteriorly.

Anterolateral angles of pronotum angularly produced forward beyond collar; lateral borders expanded, slightly reflexed, convex, barely sinuate in middle; fore disc with rather blurred 4(2 + 2) ridges, hind disc sparsely granulate. Lateral borders of scutellum carinate, slightly sinuate before apex; tip acute; carina thin, disc transversely rugose. Hemelytra reaching slightly over fore border of tergum V in both sexes; corium not reaching hind border of connexivum II; apical angle of corium rounded, apical border convex;

clavus reaching tip of scutellum; membrane without veins. Hind wings apparently missing.

Abdomen elongate ovate, with subparallel sides; connexivum relatively wide; connexiva II and III fused; PE-angles III to VI slightly protruding, PE-VII angularly rounded (♂), or rounded (♀). Paratergites (♂) large, flat, incised exteriorly, almost reaching tip of a cordate hypopygium; the latter with median ridge reaching tip of disc. Paratergites (♀) large, rounded posteriorly and incised exteriorly, almost reaching tip of a slightly incised segment IX. Spiracles II and VIII lateral, III to VII ventral and not visible from above.

Measurements: head ♂ 15:15, ♀ 15:15; relative length of antennal segments I to IV: ♂ 8.5:5:9:9, ♀ 8:5:8.5:8.5; pronotum ♂ 15:31, ♀ 14:31; ratio width of fore lobe/width of hind lobe ♂ 28:31, ♀ 27:31; scutellum ♂ 15:17, ♀ 16:17; abdomen ♂ 58:37, ♀ 62:37 both across segment V; hypopygium 7:9.5.

Color: testaceous; tarsi yellow; membrane white, hyaline.

Total length: ♂ 4.20, ♀ 4.36 mm; width of pronotum ♂ 1.24, ♀ 1.24 mm; width of abdomen ♂ 1.48, ♀ 1.48 mm.

Holotype ♂ (BISHOP 9119), Society Is., Tahiti I., Mt Aorai trail, 1500 m (5000′), E. C. Zimmerman coll., in dead *Cyathia* fronds.

Allotopotype ♀ (BISHOP), collected with holotype, and 2 nymphs.

A. tahitiensis n. sp. represents the first stage of brachypterism, with only the membrane reduced and the hind wings missing; the abbreviation of the hind lobe of pronotum and scutellum has not yet occurred, but the chitin of the corium is already very thin and hemelytra are flat; the venation of corium is beginning to disappear. The nymphs have only 1 dorsal scent gland on tergum IV.

A. tahitiensis n. sp. is related to *A. pacificus* (China), 1930, but may be separated at once by abbreviated hemelytra.

Arbanatus brachypterus Kormilev, new species Fig. 233.

♂. Brachypterous. Elongate ovate; head, pronotum, scutellum and corium granulate; tergum deeply punctured.

Anterior process of head thin, rounded anteriorly, reaching basal 1/3 of antennal segment I; antenniferous tubercles blunt, slightly diverging; postocular borders rounded; eyes small, semiglobose; vertex with V-form rows of granules. Antennae 2 × as long as width of head across eyes. Labium reaching fore border of prosternum, labial groove open posteriorly.

Pronotum with hind lobe abbreviated, half as long in middle as fore lobe; anterolateral angles produced forward beyond collar and rounded apically; lateral borders slightly sinuate behind middle, convex anteriorly and posteriorly; hind border straight. Fore disc with a thin median sulcus, flanked by 2(1 + 1) elevations half surrounding 2(1 + 1) callosities, and with 2(1 + 1) narrow ridges along lateral borders; hind disc granulate.

Scutellum subtriangular, widely rounded posteriorly; median carina thin and low; disc depressed along basal border, transversely rugose on apical half.

Hemelytra without membrane, but clavus is still developed, though not reaching tip of scutellum as in macropterous species; corium reaching tergum I, its apical angle rectangular, apical border slightly convex; disc granulate.

Abdomen ovate, with straight, subparallel lateral borders, rounded from segment VI; connexiva II and III fused; PE-angles II to V not protruding; exterior borders of connexiva VI and VII forming together an obtuse angle, PE-VII forming obtuse, slightly reflexed angles (♂), or are rounded (♀). Tergum I split into 2(1 + 1) narrow, transverse plates placed laterad of the tip of scutellum and separated from central dorsal plate by thin carina. Central dorsal plate, consisting of terga II to VI, completely fused into a large plate, deeply punctured in middle and bearing 4(2 + 2) rows of round callous spots; tergum IV produced backward in middle and bearing a scar of a dorsal scent gland. Tergum VII is almost vertical in ♂, with a transverse carina along hind border; moderately raised in ♀. Paratergites (♂) small, cylindrical, reaching 1/2 of hypopygium; the latter strongly declivous, rounded posteriorly, with a high median ridge, not reaching tip of disc. Paratergites (♀) triangular, reaching 1/2 of segment IX, which is pointed posteriorly. Spiracles II lateral,

III to VI ventral, placed close to margin, VII sublateral and slightly visible from above in ♂, barely visible in ♀; VIII lateroterminal.

Measurements: head ♂ 12:12, ♀ 11.5:11.5; relative length of antennal segments I to IV: ♂ 7:3.5:6.5:7, ♀ 6:3:6:6; pronotum ♂ 10:25, ♀ 9:24; ratio width of fore lobe/width of hind lobe ♂ 22.5:25, ♀ 20:24; scutellum ♂ 9:14, ♀ 9:14; abdomen ♂ 35:30, ♀ 37:27.5; hypopygium 5.5:7.

Color: pale testaceous (♂); antennae, labium and femora, orange-yellow; tibiae and tarsi yellow. ♀ is darker, tetstaceous, tarsi yellow.

Total length: ♂ 2.72, ♀ 2.70 mm; width of pronotum ♂ 1.00, ♀ 0.96 mm; width of abdomen ♂ 1.20, ♀ 1.10 mm.

Holotype ♂ (BISHOP 9120), Samoa, Upolu, Afiamalu, 630 m (2100′), 13.VI.1940, E. C. Zimmerman coll., beating shrubs.

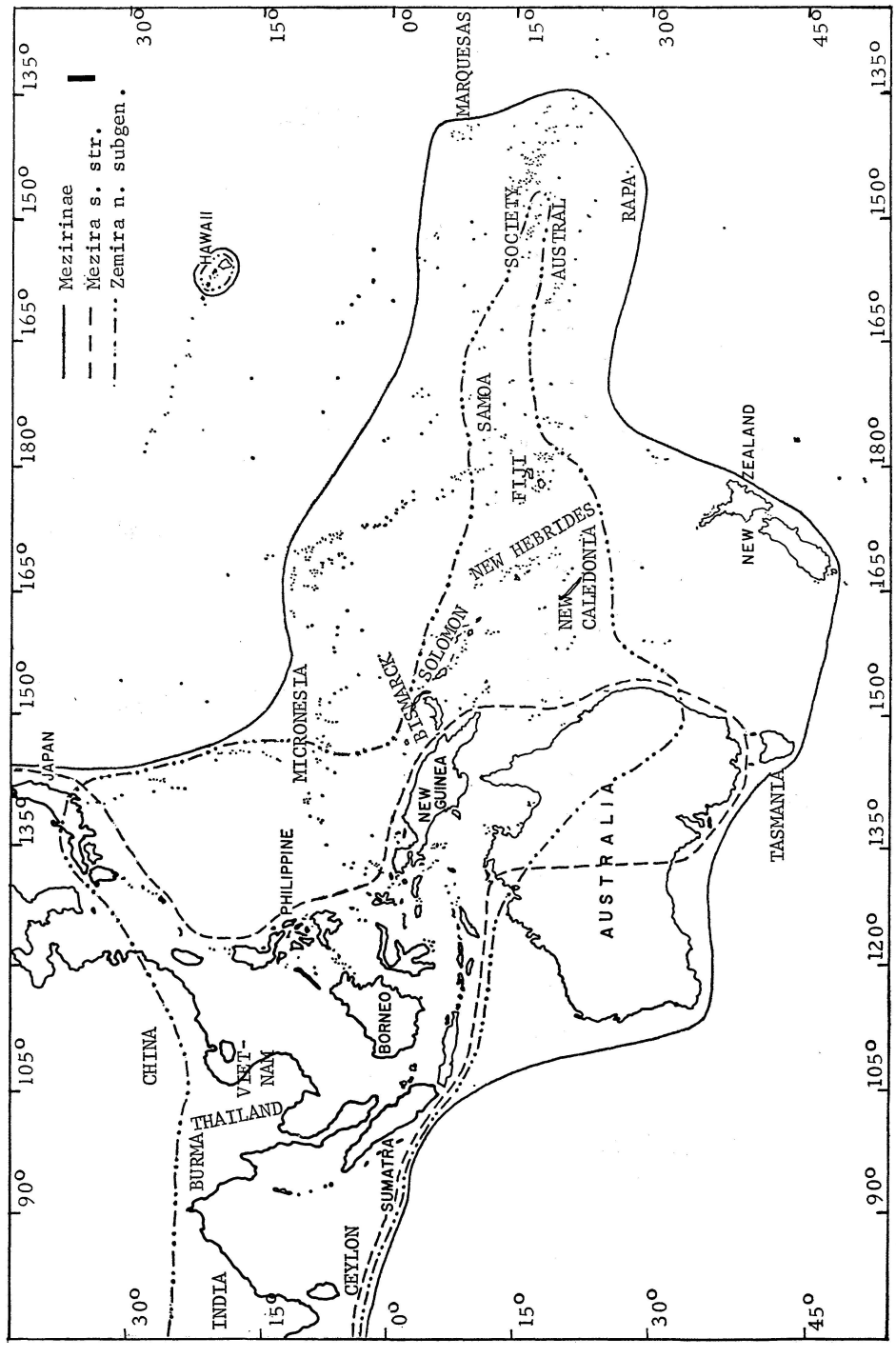
Allotype ♀ (BISHOP), Samoa, Upolu, Tiavi, 2100′, 21.VI.1940, E. C. Zimmerman coll.

A. brachypterus n. sp., one of the smallest aradids, belongs to the "parallelus group," but the developed brachypterism produced many changes, particularly the abbreviated pronotum and scutellum, and the absent membrane and hind wings.

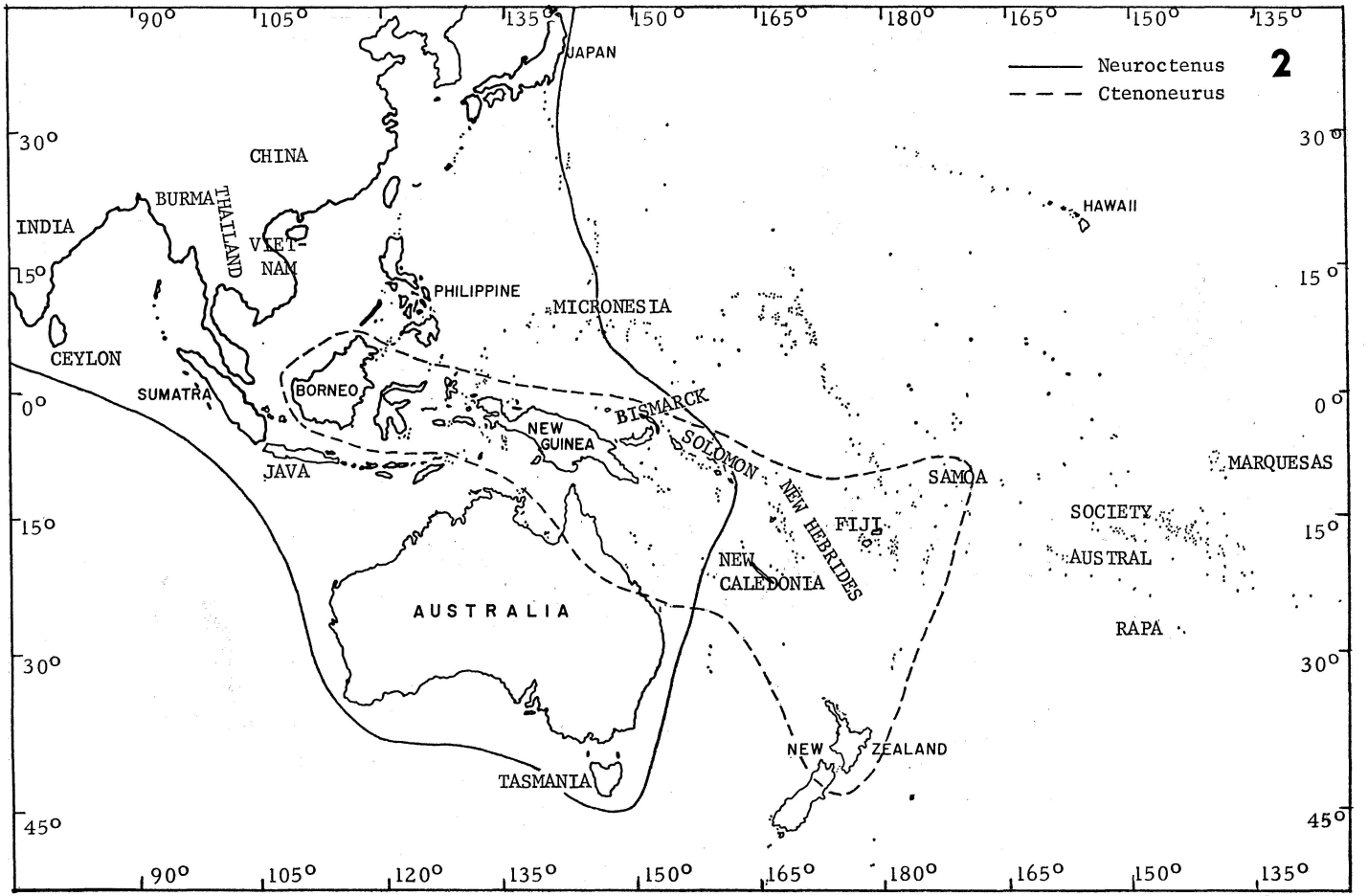
BIBLIOGRAPHY

Hardy, D.E. 1964. Notes and exhibitions. *Proc. Hawaii. Ent. Soc.* **18:** 338.

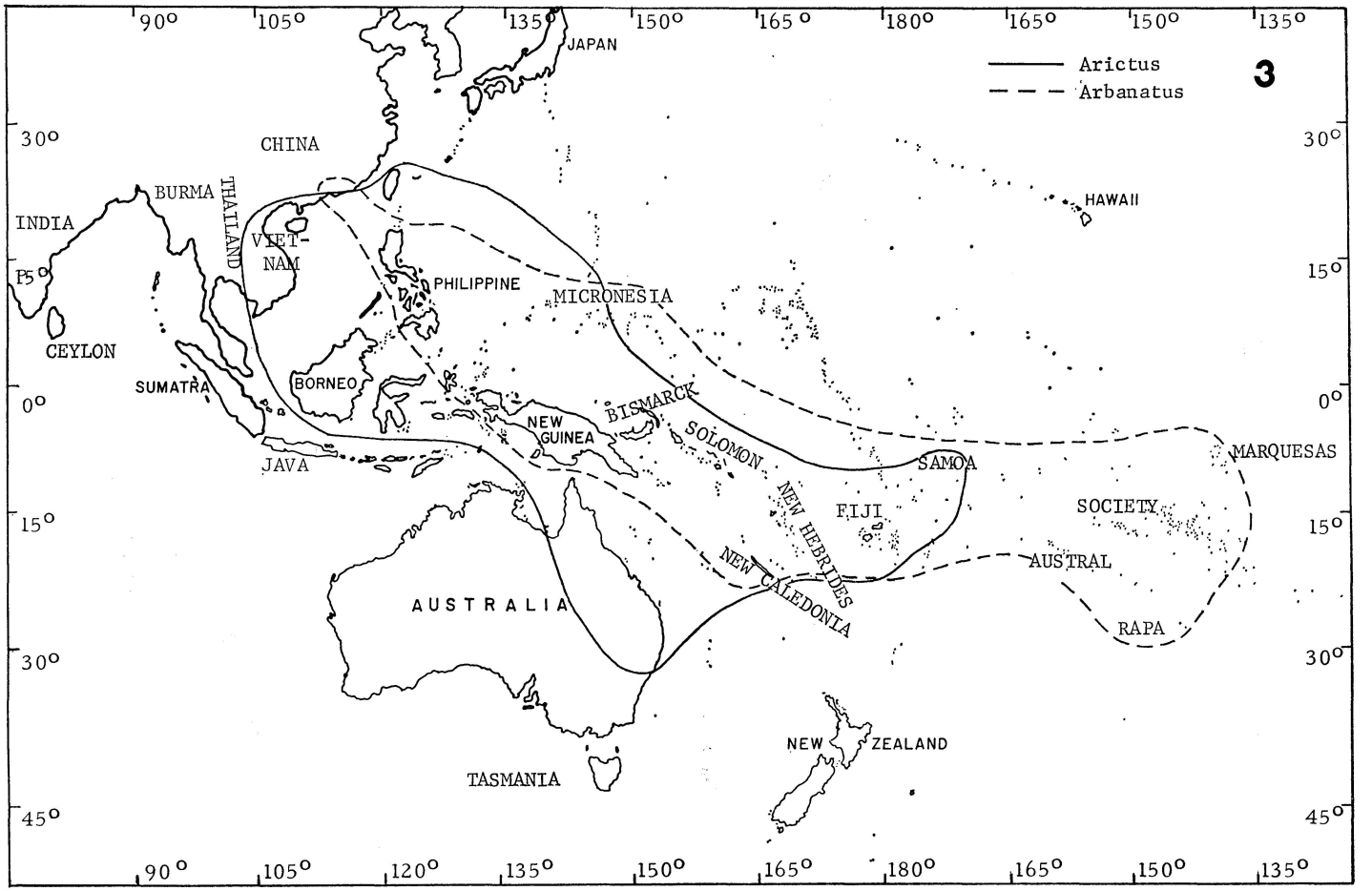
Usinger, R.L. & R. Matsuda. 1950. Classification of the Aradidae. British Museum (N.H.), London; vii+410 p., 101 fig.



Map 1. Range of subfamily Mezirinae, genus *Mezira* s. str., and *Mezira* (*Zemira*) in the Oriental and South Pacific regions.



Map 2. Range of genera *Neuroctenus* and *Ctenoneurus* in the Oriental and South Pacific regions.



Map 3. Range of genera *Arictus* and *Arbanatus* in the Oriental and South Pacific regions.

INDEX

New names are indicated by **bold face** type, synonyms by *italics*.

abdominalis (Arbanatus) ... 147
abdominalis (Brachyrhynchus) ...28
aberrans 62
Acoryphocoris 137, 138
acuminata (Chinessa) 126
acuminatus (Arictus).....108
acuminatus (Glochocoris) 142
acutissima (Chinessa) 125, 126, 127
acutissima (Kema) 116
acutus (Glochocoris) 143
acutus (Neuroctenus).....83
alatus 136
alfa 110
angularis 107
angulata (Usingerida) 132
angulatus (Acoryphocoris) 139
angulatus (Chrysodaspis).....101
angulatus (Leiocoris) 114
angulatus (Mastigocoris) 12
angulatus (Neuroctenus) 73
angusticornis 140, 141
angustus (Neuroctenus) 85
angustus (Pelecoris) 98
annulipes 134
antennatus (Acoryphocoris) ..141
antennatus (Neuroctenus) 96
Aphelocoris 134
appendiculatus 63, 88
Aradus 31, 44, 112
Arbanatus 5, 142, 144
Arictus 5, 27, **106,** 111, 115
armata 120
armigera 36
armigerus 26
Artabanellus 12
Artabanus 7, **12,** 35, 63, 117, 122
atkinsoni 22
auritomentosa 102
auritomentosus 102
Barcinus 48, 130
basalis.....90
bellicosa 121
bergrothianus 60
beta 111
bicaudatus (Daulocoris) 103, 104, 105
bicaudatus (Neuroctenus) 68
bilobatus 91
bilobiceps 16, 19, 22
bispiniceps 120, 122
bloetei 117
borneensis (Ctenoneurus) 57
borneensis (Leiocoris) 114
brachycephalus 112
brachyptera (Chinessa) 119
brachyptera (Mezira) 28
brachypterus (Arbanatus) ...157
brachypterus (Artabanus) 18
brachypterus (Pseudoartabanus) 133
Brachyrhynchus 22, 27, 28, 38, 40, 44, 102, 105, 112
breviceps 48
brevicornis 141
brevirostris.....79
brunneus 150, 151
burmensis 48
Caecicoris 12
carinata 132
castaneus 150
ceramensis (Chinessa) 130
ceramensis (Neuroctenus) 93
Chelonocoris 2
Chiastoplonia 137, 139
chinai 138
Chinessa 4, 117
Chrysodaspis 41, 99, 100
Cinyphus 22
cochereaui 55
coghiensis 60
confusus.....136
cornigerus 4, 105
crassicornis 79, 80, 81, 82
Cremastaptera.....11
Crimia 12, 22, 29, 43, 48, 57, 90, 91, 117, 122, 130, **131**
Ctenoneurus **3,** 4, 5, **49,** 57, 62, 91, 98, 152, 155
Daulocoris 4, 27, 28, 40, **102**
Daulocorisella 43
degeneratus 16
denticeps 23
denticulatus 140
Dimifaia.....96, 97
Dimorphacantha.....26
distincta 26
distinctus.....154, 155
Dolichothyreus 134
doreica 22
Dusius 27
dybasi 85
Dysodius 40
egelidus 90
elegantulus 151, 152
elongatus 151
eurycephalus 63, 86
exarmata 37
feana.....105
feanus 102, 105
ferox 127
ferreus 95
ferrugineus 113
fijiensis (Artabanus).....19
fijiensis (Ctenoneurus).....59
flavosetosa 132
flavosuturatus 75
foratus 82
forfex 120, 121
formosanus (Daulocoris) .. 104, 105
formosanus (Pseudoartabanus) 133, 134
fukienensis 20
fulgida (Chinessa).....120
fulgidus 80
funebra.....46
furcatus 22
gazellensis (Artabanus).....17
gazellensis (Daulocoris).....104
geniculatus.....22
Glochocoris 142
gloriosus 24
grandis 71
granulata 28
granulatus 142
granuliger 82
gressitti (Arbanatus) 149
gressitti (Arictus) 110
gressitti (Chinessa).....129
gressitti (Neuroctenus) 72
halaszfyi (Artabanus) 19
halaszfyi (Ctenoneurus) 55, 56
hammaensis 58, 60
Hammatoneurum 35, 43
hispida 34, 35
horribilis 122
hortatrix 75
hsiaoi 40
hyalinipennis 76, 77
hyalinipennis australicus.. 76, 77
incautus 84
incisa 40
indica 43
indonesicus 92

inermis (Arbanatus) ..144, 146, 149
inermis (Artabanus) 12
inermis (Crimia) 132
iniqua 129
iniqua ceramensis.....130
insignis.....56
izzardi 111
lavanicus 84
kashmirensis 68
Kema 115
kerzhneri 35
Kiritshenkiessa 10
laminifera 130
faminiferus 130
lateralis (Crimia) 43
lateralis (*Daulocorisella*) 43
lateralis (Mezira) 29
lativentris 22
leai 151, 152
Leiocoris 112
lifuana 54
lifuanus 52, 54, 55, 56, 61, 62
lobata (Chiastoplonia) 138
lobatus (Neuroctenus) 93
lobulata (Chinessa).....123
lobulata (Dimifaia).....97
lobulatus (Neuroctenus) 93
lobuliventris (Arictus) 111
lobuliventris (Chinessa) 124
lobuliventris (Neuroctenus)...77
longiceps (Arbanatus) 146, 151
longiceps (Ctenoneurus) 51
longicornis (Arbanatus) ....
146, 147
longicornis (Arictus) 111
longicornis (Mezira) 42, 43
longicornis (Neuroctenus).....90
longirostris 152
longiscutum 147
longulus 146
loriae 28
luchti (Dimorphacantha).....26
luchti (Neuroctenus).....87
lugubris 55
luzonica 42, 43
maai (Chrysodaspis) 100, 101
maai (Odontonotus) 134
magnificus 25
major 54
majusculus 71
marginella 102
marianensis 109
Mastigocoris 12
mayri 87, 93
mcfarlandi 19
medius 96
membranacea..5, 26, 31, 33, 40, 44,
46, 48, 102
membraneceus 31, 44, 102
Mezira 3, 4, **27,** 28, 31, 35,
41, 43, 54, 62, 63, 70, 87,
96, 100 102, 104, 105,
106, 107, 109, 110, 111, 112
MEZIRINAE 4
meziroides 96
microcera 12
microcerus 12
micronesica 46
micropterus 15, 17, 18
millironi 88
minor (Neuroctenus) 92
minor (Wuiessa) 131
minusculus 71
minutus (Arbanatus) 153
minutus (Ctenoneurus) 55
minutus (Neuroctenus) 63
modesta (Chinessa) 122
montanus 20, 22
morio 85
moturikiensis 150, 152
muiri.....94
myersi.....58
nanamaraki 112
nasutus 5, 102
necopinata 125, 127, 129
necopinatus.....73, 79
Neuroctenus 3, 4, 5, 29,
49, 57, **62,** 91, 97, 117
nitidulus 91
obscurus (Artabanus) 20
obscurus (Scironocoris) 26, 27
obsoletus 85
Odontonotus 134
orientalis (Brachyrhynchus)..
27, 44
orientalis (Dysodius).....40
Oroessa 27
ovatus (Acoryphocoris) 139
ovatus (Chrysodaspis) 101
oviventris (Acoryphocoris) ..139
oviventris (Caecicoris).....12
oviventris (Odontonotus).....134
pacificus (Arbanatus) 144,
153, 157
pacificus (Neuroctenus).....73
palauensis (Glochocoris) 142
papuasica 116
papuasicus (Artabanus) 22
papuasicus (Scironocoris)..26, 27
papuensis 130
par 70
parus 70
parallela (Crimia).....57
parallela (Mezira) 44
parallelus (Arbanatus) .....
144, 152, 153, 155
parallelus gracilis
(Arbanatus) 152
parallelus (Ctenoneurus) 57
paralobulata.....123, 124, 125
pauperula 137
pauperulus 79
Pelecoris 97, 98
pendergrasti 58
persimilis 87
Phanocoris 12
philippinensis (Arbanatus)..
144
philippinensis (Ctenoneurus)
56
philippinensis (Mezira) 43
Phloeobia 2, 27
Pictinellus 144, 150, 151,
152, 153, 155
Pictinus 142, 144, 153
pilifera (Mezira) 31, 37
piliferus (Arbanatus) 155
piligera 29
pilosulus 154, 156
Placogenis 97
polyacantha 48
polyacanthus 48
polynesicus 155
productus (Arbanatus).....146
productus (Barcinus) 130
prominens 62
Pseudoartabanus.....133
punctiventris 54
pusillus 142, 143
pygmaea 138
pygmaeus 142
quadridentata (Chinessa) 125
quadridentata (Mezira) ...35, 36
quadridentatus (Aphelocoris)
134, 136
quadrispinosum (*Hammatoneurum*)
35
quadrispinosus (Artabanus) 35
roberti 28
robusta 127
robustus (Arbanatus).....156
robustus (Artabanus) 21
robustus (Daulocoris) 105
rossi 47
Rossius 48
rubrescens 91
samoaensis 61
samoanus 155, 156
sayi 27
scabrosa (Mezira) 31
scabrosus (Arbanatus).....153

scabrosus (Neuroctenus).....70
Schoutedeniessa 113
Scironocoris 26
seclusus 81
sedlaceki (Arictus) 110
sedlaceki (Neuroctenus).....78
serrata 41
serrulatus 76, 77
sertiventris 63, 73, 78
sexdentatus 23
similis 31
simplex 148
simulans (Arbanatus) 148
simulans (Ctenoneurus) 61
singularis 70
sinuatus 22
solomonensis (Ctenoneurus) 52, 54
solomonensis (Mezira) 47
spiculifer 60
spinipes (Kiritshenkiessa) 11
stigmatus 134
subfurcata 96
subfurcatus 96
subinermis 38
subparallelus (Arbanatus).. 149, 150
subparallelus (Leiocoris) 114
subtriangula 46, 47, 48, 105
sulcata 40
sumatrensis 37
superbus 24
tagalicus.....106, 110
tahitiensis 156
taiwanicus (Arictus).....109
taiwanicus (Neuroctenus) 75
telmae 152
teter 40, 41, 100
thailandica 39
thoracocera 112
thoracoceras 106, 112
tomentosa 105
tomentosus 105
triangula 38
triangulus.....38
tricolor 150
truncatus (Barcinus).....130
truncatus (Glochocoris).....143
tuberculata (Crimia) 132
tuberculatus (Glochocoris).....142
tuberosa 132
umboiensis 18
unica 131
usingeri (Arictus) 109
usingeri (Mastigocoris) 12
Usingerida 132
varia 22
variegatus 82
varius 22
vicinus 96
victor 23, 24, 25
weberi 96
Wuiessa 131
yunnana 31
Zemira 4, 5, 27, 28, 31
Zeugocoris 12, 27
zimmermani 52